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THE JOURNAL

OF THE

American Medical Association

Subscription, $7.00 | PUBLISHED WEEKLY | Single Copies, 25 Cents

VOLUME 100, No. 18 | 535 North Dearborn Street, CHICAGO, ILL. | MAY 6, 1933

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Entered as Second-Class Matter, June 25, 1885, at the Postoffice at Chicago, Ill., under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of Oct. 3, 1917, authorized on June 14, 1918.

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The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 100, NO. 18 CHICAGO, ILLINOIS MAY 6, 1933

PROFESSIONALIZATION IN PUBLIC HEALTH SERVICE

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NEW YORK

The term "professionalization" as employed in this discussion refers to the establishment of suitable educational and professional standards for public health personnel. In the older professions of medicine, law and dentistry, it became necessary to protect the public against unqualified practitioners, many of whom held diplomas. This was done through the establishment of qualifying boards.

Consideration of the situation in respect to public health raises a number of questions, a few of which are as follows: Is public health service a specialty of medicine? Is it so distinct from medicine as to warrant its being regarded as a new and separate profession? Has sufficient progress been made to warrant the adoption of qualification standards for the personnel? Should the examinations required of health officers be open only to physicians? Should suitable examinations be offered and certificates awarded to personnel necessary in health organizations, other than the health officers, such as sanitary engineers, statisticians, bacteriologists, chemists and nurses? Are appointing executives and boards able to distinguish the qualified health officer or health worker from the unqualified? If not, should suitable qualifying agencies be created? Should health officers and other health workers be required in the future to have degrees or certificates from reputable universities, or from an authoritative qualifying agency, in order to be eligible for employment in public health organizations?

QUALIFICATIONS

Should the qualifying agency be state or national? If on a national basis, should it have a federal status or should it be an unofficial agency such as is the National Board of Medical Examiners? If the National Board of Medical Examiners should so enlarge its scope as to embrace public health, would it be able to satisfy all requirements? Would it be feasible for the national qualifying agency not actually to conduct examinations but instead to investigate courses offered by universities and accept those degrees which satisfy required standards? Although it is not my purpose to discuss each of these questions, observations on certain factors involved may be in order.

A vast store of knowledge and experience in the field of public health has been assembled. The material has been classified and ordered so that it now affords a basis for the guidance of health organizations and for university courses of instruction. Much of our knowledge of public health has been derived from modern medicine, but knowledge essential to public health practices has been drawn also from engineering, statistics, epidemiology, economics, sociology and public education. In each field the available knowledge had to be adapted to serve community needs. It had to be coordinated with the knowledge derived from other fields. The approach during the past twenty years or more to a science of public health has been an evolution through trial and error methods applied in the school of experience.

The modern school of medicine supplies to the health officer knowledge that is essential and not elsewhere obtainable. The health officer needs training in such subjects as anatomy, physiology and pathology; the individual in health and in sickness; diseases—their cause, mode of spread, prevention and cure; maternity, infancy, childhood and adult life; the various hygienes and nutrition, and many other subjects that bear both on individual and on community health. Medicine is indeed broad in scope and most phases of it are indispensable to the health officer.

The medical school usually centers interest on the individual patient, whereas the school of public health focuses interest on the community. The community as a whole is the patient of the health officer. Individuals are considered only as they affect the health welfare of others. As it is exceptional for the instruction in medical schools to emphasize community interests and public health subjects, the usual medical graduate desiring to qualify as a health officer needs additional training in public health and some practical experience. Likewise the graduate in civil engineering is not qualified for public health service until his knowledge and point of view are adapted to community needs, and until he has taken additional training in the sanitary sciences such as usually are required by reputable universities for the degree in sanitary engineering.

Public health service as a vocational field is new because modern medicine on which, to a large degree, it is based, is itself comparatively new. Hence a large percentage of the present health officers, although physicians, have had no special university training in public health. Such knowledge as they possess, aside from medicine, has been acquired from observation, reading and experience.

STANDARDS OF ELIGIBILITY

In recent times, university courses in public health have been organized. The movement in Great Britain is older than in the United States and Canada. There the medical act of 1886 made provision for the registration of diplomas in sanitary science, and such registra-

Read before the Annual Congress on Medical Education and Licensure, Chicago, Feb. 14, 1933.

tion became necessary for eligibility to health officer positions in Scotland in 1897 and in the United Kingdom in 1926. Twenty-two universities of Great Britain have for many years been granting diplomas in public health, state medicine or sanitary science. Since 1931 the time required for a physician to secure the diploma of public health has been eighteen months: nine months of full time university work, three months' service in an infectious disease hospital, and six months of practical experience under a medical officer of health. Two years must elapse after medical registration before the registration of the public health diploma is permitted. Gradually a reserve of personnel satisfying the legal requiremets for health officers has been built up so that the enforcement of eligibility standards in Great Britain is now comparatively easy.

In the United States and Canada there are seventeen institutions offering degrees in public health. Harvard University Medical School granted its first doctorate in public health in 1911; the University of Pennsylvania Medical School in 1912; and the Harvard Medical School and Massachusetts Institute of Technology in 1914. A later development was the establishment of schools of public health, the first of which was that of Johns Hopkins University, which graduated its first class in 1919, followed by Harvard University School of Public Health in 1923, and Toronto University School of Hygiene in 1928. In table 1 are listed the seventeen institutions granting degrees and the number of degrees granted by each. It will be noted that there were 107 graduates in 1930, 176 in 1931, and 147 in 1932. About eight universities now offer degrees in sanitary engineering, and eighteen institutions in the United States and Canada offer diplomas or degrees in public health nursing. The numbers of diplomas or degrees in public health nursing granted by these institutions were for the past three years (1930) 237, (1931) 283 and (1932) 313, respectively.

Although health departments—national, state and local—are employing trained health officers in increasing numbers and as a rule have been pleased with their work, the movement is still of recent growth and is limited in scope. It may be expected to gain momentum from year to year. Many appointing authorities—governors, mayors and boards of health—are still insufficiently impressed with the desirability of having suitable eligibility standards for personnel. Human life and health and public funds are at stake. Authorities should welcome the guidance of a qualifying agency in making appointments.

In Canada the laws of all the provinces except Alberta and Saskatchewan require that the health officer, usually designated as Deputy Minister of Health, be a qualified physician. In New Brunswick, in addition to being a physician, he must have a diploma in public health. Irrespective of legal requirements, all provincial and local health officers in Canada are physicians.

The United States Public Health Service has established professional eligibility standards for its personnel. Examinations are conducted as a basis for admission to the service and for promotion. The medical officers have received public health training and experience in the service. In recent years, some of the new appointees have held diplomas in public health. In addition to medical officers, the service includes sanitary engineers, dentists, nurses, pharmacists and technicians.

Of the forty-eight state health officers, forty-seven are physicians, but the laws of only thirty-eight states specify that the health officer shall be a physician. In three states the ranking health executive, the commissioner of welfare, is a layman, and in each case a physician as health officer is his subordinate. Four states have no legal requirements and one merely prescribes that he must be a citizen and a voter. The laws of twenty-seven states require that the health officer be a physician, and moreover be "trained in," "skilled in," "informed in" or "experienced in" "public health," "sanitary science" or the like. The only legal reference to a degree of doctor of public health is in the Michigan law, where it is mentioned as an alternative to five years' experience as a practicing physician.

TABLE 1.—*Number of Degrees in Public Health Granted in the United States and Canada During 1930, 1931 and 1932**

School	Degrees	No. of Degrees Granted 1930†	1931†	1932‡
Columbia University College of Physicians and Surgeons	M.S.	0	1	8
	Ph.D.	0	0	0
Harvard University School of Public Health	M.P.H.	6	13	9
	Dr.P.H.	1	1	0
Johns Hopkins University School of Hygiene and Public Health	C.P.H.	24	32	33
	M.S.	0	3	1
	Sc.D. in Hyg.	14	19	12
	Dr.P.H.	5	15	5
McGill University School of Medicine	D.P.H.	0	2‡	1
Massachusetts Institute of Technology	B.S.	8	16	10
	M.S.	0	2	2
	C.P.H.	4	4	0
	Dr.P.H.	1	0	0
	Ph.D.	0	0	1
Ohio State University	M.S.	1	1	0
Queen's University	D.P.H.	0	0	0
University of California	A.B.	5	4	3
	M.A.	1	0	0
	Dr.P.H.	0	0	0
	Ph.D.	0	0	0
University of Chicago	M.S.	2	2	4
	Ph.D.	2	4	3
University of Georgia	B.S.	2	3	1
	M.S.	1	1	2
	Dr.P.H.	4	0	0
University of Michigan	M.S.	5‡	9‡	16
	Dr.P.H.§	1	1	2
University of Minnesota	M.A. or M.S.	1	0	0
			2	4
	Dr.P.H.	0	1	0
	Ph.D.	0	0	1
University of Montreal	D.P.H.	0	0	0
University of Pennsylvania	M.S.	0	7	4
	Dr.P.H.	0	1	0
	M.A.	0	2	0
	Ph.D.	0	1	1
University of Toronto	D.P.H.	12	13	14
	M.A.	1	0	0
	Ph.D.	0	0	2
University of Western Ontario	D.P.H.	0	0	0
	Dr.P.H.	0	0	0
Yale University School of Medicine	C.P.H.	3	6	2
	M.S.	1	2	0
	Dr.P.H.	1	2	0
	Ph.D.	1	6	6
Total		107	176	147

* This table excludes degrees in sanitary engineering and public health nursing. Public health nursing certificates or degrees were reported by 16 educational institutions in the United States as follows: 225 in 1930, 251 in 1931, and 278 in 1932.

† Figures for 1930 and 1931 (with the exception of those for the University of Chicago) quoted from published reports of the American Public Health Association's Committee on Training and Personnel: figures for 1932 (and for the University of Chicago for all three years) obtained directly from the university authorities.

‡ Figures as corrected by the university authorities.

§ Although called D.P.H. at the University of Michigan, this is really a Doctor of Public Health degree and not a diploma in public health.

The laws of only twenty-two states prescribe legal qualifications for local health officers. I have been unable to study carefully the nature of these requirements, but the information available as to practice speaks for itself. At the close of 1931 there were 596 full time county health organizations in thirty-six states. The health officers of all were physicians, except three, one of whom was a veterinarian, one a doctor of philosophy in bacteriology, and one a dentist.

HEALTH OFFICERS OF CITIES

There are 967 cities in the United States with 10,000 inhabitants or over.[1] Of these, 416 (43 per cent) employ full time health officers, of whom 265 (64 per cent) are physicians and 151 (36 per cent) are not. The 151 lay health officers are serving in twenty-five states. Forty-one of them are distributed in twenty-two states (one state has six, three states have four, five states have two, and thirteen states have one) and 110, or 73 per cent, are serving in the three states of Massachusetts, New Jersey and Pennsylvania. In these three states there are 220 cities of 10,000 inhabitants or over, of which 126 have full time health officers, of whom sixteen, or 13 per cent, are physicians, and 110, or 87 per cent, are not physicians:

The cities smaller than 10,000, not embraced by county health organization, may occasionally have full time health officers, but generally the health officers serve on a part time basis; some are physicians and many are not.

In the United States there are ninety-three cities having 100,000 inhabitants or over, and representing 30 per cent of the total population of the country. Of these cities twenty have part time medical health officers and seventy-three have full time health officers, sixty-seven of whom are physicians and six are not.

TABLE 2.—*Health Officers*

State	Number of Cities of 10,000 or Over	Full Time Health Officers, Number	Health Officers Physicians		Health Officers Not Physicians	
			Number	Per Cent	Number	Per Cent
Massachusetts...	73	37	5	13	32	87
New Jersey.....	55	31	4	13	27	87
Pennsylvania....	92	58	7	12	51	88
	220	126	16	13	110	87

In some states and cities, civil service has been adopted for the personnel of government, including public health. Generally it applies to subordinate personnel, technical and clerical, but not to the health officers.

This review of the practice in the United States reveals that although health officers are usually physicians, the exceptions are numerous. Generally it is recognized that it would be of advantage to the health officer to be a qualified physician and eligible to participate in medical meetings.

PUBLIC HEALTH TRAINING

It has been questioned whether the time and cost of preparing for public health service might not be reduced by omitting certain courses required in medical school, such, for example, as surgery, and devoting the time thus saved to courses essential for public health service. The late Professor Sedgwick, who was a pioneer in giving courses in public health at the Massachusetts Institute of Technology, has been quoted as expressing the following opinion:

> Instead of the present rigid medical curriculum which resembles the capital letter I, we ought today to have a new curriculum of equal height and breadth, but shaped like the capital letter Y, of which the base should still be substantially the first two years of the present curriculum—anatomy, physiology, bacteriology, pathology, etc., but with the upper parts diverging, the one arm or branch leading as now in the last two years to the degree of Doctor of Medicine (M.D.) and the other in the last two years to the degree of Doctor of Public Health (D.P.H.).

1. City Health Officers, Pub. Health Rep. **46**: 2921 (Dec. 4) 1931.

A number of Professor Sedgwick's students, not physicians, are now in health work; a few could not obtain satisfactory employment and entered other fields or later completed the requirements for the medical degree. The wider range of opportunity afforded by a medical degree is a factor to be considered by the student.

PROFESSIONAL STANDARDS

In any consideration of plans for establishing eligibility standards for public health personnel, it is essential to decide the question whether public health shall be classified as a specialty of medicine or as a separate, though related, profession. If public health service should be legally or otherwise established throughout the country as a specialty of medicine, or a specialty for which a medical degree is a prerequisite, the present facilities for passing on medical qualifications could be expanded to include public health.

Public health service in this country has grown rapidly. Professional standards have not been uniformly adopted and there is no reservoir of trained personnel available. This is especially true of trained medical health officers. This situation, unfortunately, is about to change through the slashing of budgets. Eligibility standards based on public health training cannot be enforced uniformly until one or more eligible candidates are available for every vacancy. Whatever standards may be adopted, it is certain that the transition will be slow.

There are now a large number of nonmedical health officers. In our best health organizations that have medical officers there are many nonmedical health workers with university training. They constitute an essential part of a well rounded health organization. They consider themselves entitled to a dignified status and they insist on being included in any scheme for establishing eligibility standards for health officers. As their basic education, in many instances, was not acquired in medical schools, they believe it is not feasible for medical examining boards, state or national, as now constituted, to conduct examinations for them. If qualifying agencies restricted to public health are to be established, they think important groups, such as engineers, nurses, statisticians and bacteriologists, should also be provided for.

A number of physicians, some of whom are health officers, advance the opinion that the medical officer of health alone should be considered in connection with qualification standards. In their opinion the nonmedical workers are his subordinates and he can pass on their qualifications by considering their university degrees and experience. This is open to the objection that it might give rise to two thousand or more different standards, as each health officer or board of health could set up eligibility standards. Forty-eight different state standards likewise are undesirable. A single standard, applicable to each group of workers and recognized throughout the country, would be of advantage to the appointing authorities, the public, the persons who have or who may take training, and the universities which supply the training. The wide range of opportunity for employment which a national qualifying agency might insure would tend to attract able personnel to the field of public health. There would be opposition in many states to a legalized federal qualifying agency on the ground that it would tend to federalize state and local health services.

In the field of medicine the National Board of Medical Examiners, a voluntary agency, has avoided such

objections and has built up prestige as a national agency. Its more than 3,000 diplomates are recognized without additional examination in forty-two states, Puerto Rico, the Canal Zone, Hawaii, the United States Army, and the United States Public Health Service. It has twenty subsidiary boards suitably located throughout the country. It has been asked to consider expansion to include the specialties in medicine. If in the field of public health only physicians were eligible, public health could be included as a medical specialty.

Should consideration be given to the creation of a new qualifying agency restricted to public health, or could the National Board of Medical Examiners enlarge its name and scope so as to include all branches of public health? An existing agency could expand its scope and quickly inaugurate new work, whereas to establish an entirely new agency takes time. In either case, the qualifying agency would either have to conduct examinations or pass on universities and the courses they offer. The task might be simplified by merely accepting degrees from universities that satisfy approved standards. The National Board of Medical Examiners has not followed this plan, but it has to some extent found favor with the General Medical Council of Great Britain.

CONCLUSION

The foregoing questions and observations are submitted with the hope of provoking discussion that will be of help in establishing such professional standards for public health personnel as will guide the appointing authorities, aid the universities offering courses of instruction, and at the same time furnish protection to the public.

61 Broadway.

THE TREATMENT OF HAY FEVER AND POLLEN ASTHMA BY AIR-CONDITIONED ATMOSPHERE

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Through the kindness of the Frigidaire Division of General Motors, the opportunity was afforded to study the effect of air-conditioned atmosphere on individuals suffering with symptoms of hay fever and pollen asthma.

A room large enough to accommodate four bed patients was equipped with a Frigidaire air-conditioning unit. The room had five windows, and a door opened on the corridor of the Osler Clinic. These windows and the door were kept closed but not sealed; consequently outside air entered the room under the door, through the cracks of the windows, and through the door when it was opened during the routine care of patients.

Air conditioning, when applied to enclosures for human occupancy, may be defined as the adjustment of temperature, humidity and moisture to provide comfort and health. In summer the temperature and the relative humidity must be lowered; in the winter the temperature and the relative humidity must be increased. In both cases the motion of the air must be controlled.

By the use of a cooling apparatus, temperature, which is recorded by dry bulb readings, can be easily changed. Relative humidity is the percentage of moisture which the air contains at a certain dry bulb temperature. As the air increases in dry bulb temperature, it has the ability to carry more grains of moisture. Relative humidity can be determined by the differential in the readings of the dry bulb and wet bulb thermometer or it can be determined by instruments designed for this purpose, constructed of hairs, certain woods and other articles, which will expand and contract, depending on the different moisture content of the air. In this investigation, Hygro-Thermograph charts were used, the upper portion recording dry bulb readings and the lower portion recording the relative humidity at given dry bulb temperature.

This particular problem deals with summer temperature. The control of temperature and relative humidity in the Frigidaire equipment is accomplished with a cooling coil in an air-conditioning unit. The air is forced over this cool coil by fans and is lowered to a predetermined temperature, a temperature at which it will hold only a certain amount of moisture. The excess moisture condenses out of the air, passing from the instrument into a drain pipe. After the air passes over this cooling coil the air temperature is between 40 and 50 F. and at that temperature is about 100 per cent saturated with moisture. This air, diffusing with the air in the room and warmed by the heat coming in through the walls, through the cracks under the door and from other sources, such as that given off by body heat and electric lights, rises in temperature and in so doing is lowered in relative humidity. The excess moisture which condenses out of the air as water and which runs into the drain pipe carries with it practically all dust particles and grains of pollen which are blown over the cooling coil.

Throughout the period of the experiment, the temperature was maintained 10 degrees below the outside temperature in the open ward and the humidity was maintained at 40 per cent, which is an ideal atmosphere. It should be mentioned that the humidity during the months of August and September in the outside atmosphere at times was as high as from 80 to 90 per cent.

To study the air-cleansing efficiency of the instrument from the standpoint of pollen, a glass slide covered with a thin film of petrolatum was placed in the room before the apparatus was operated, so that pollen in the air might circulate across this greased surface. A slide was placed in the courtyard of the hospital as well as in the adjoining ward to compare the number of grains in this room with those in the outside atmosphere and the atmosphere of the ward.[1] These slides were changed every day for a period of four days and the pollen grains were counted. The pollen counts closely corresponded on the three slides. The air-conditioning apparatus was then put into operation, and every day thereafter pollen counts were made on the slides in this room, in the ward, and in the hospital courtyard. Slides exposed in places far removed from the hospital were used for control counts. Whereas the slides outside in the court and in the ward showed a count of from 10 to 30 grains of ragweed pollen per square centimeter, the slide in the air-conditioned room showed no pollen (chart 1).

Attention is directed to the high pollen count in the air-conditioned room, September 23. On the

From the Protein Clinic of the Medical Department of the Johns Hopkins Hospital.
Read before the Society for the Study of Asthma and Hay Fever, Washington, D. C., May 6, 1933.

1. Acquarone, Paul, and Gay, L. N.: A Survey of the Pollen Flora in Baltimore During 1929, J. Allergy **2**: 335 (July) 1931. Patterson, P. M., and Gay, L. N.: The Pollen Content of the Air and Its Relation to Hay Fever in Baltimore, Maryland, During 1930, ibid. **3**: 282 (March) 1932.

morning of this day, when patients were not occupying the room, several grams of dry ragweed pollen were distributed in the atmosphere. The high count was therefore expected. Twenty-four hours after this distribution the microscopic examination of the slide showed an absence of pollen. To determine just what became of the pollen that was not found on the slides in the air-conditioned atmosphere, it was necessary to make a study of the condensed moisture that came through the cooling apparatus into the drip pan. Each day this excess moisture was filtered through large papers, and after the paper had dried the sediment was studied microscopically. Without exception the papers showed a large accumulation of dust and numerous grains of ragweed pollen. The paper through which the water was filtered on the day of the distribution of pollen, September 23, contained an overwhelming number of ragweed pollen grains.

The efficiency of the cleansing principle having been established, the effect of this room on untreated subjects with hay fever was studied.

On different days, groups of ten patients were sent to this room and observed to determine the effect on their symptoms. In the individuals suffering with symptoms of hay fever uncomplicated by asthma, a striking change was noted in from ten to fifteen minutes. Within an hour the symptoms had entirely subsided and after two hours the individuals, who had previously been most miserable, had no evidence of hay fever. These patients were then returned to the rooms of the clinic. Within fifteen minutes, symptoms developed and in an hour these patients were as miserable as when they first went into the room. Patients who were suffering not only with hay fever but also with pollen asthma did not respond quite so rapidly, although within an hour

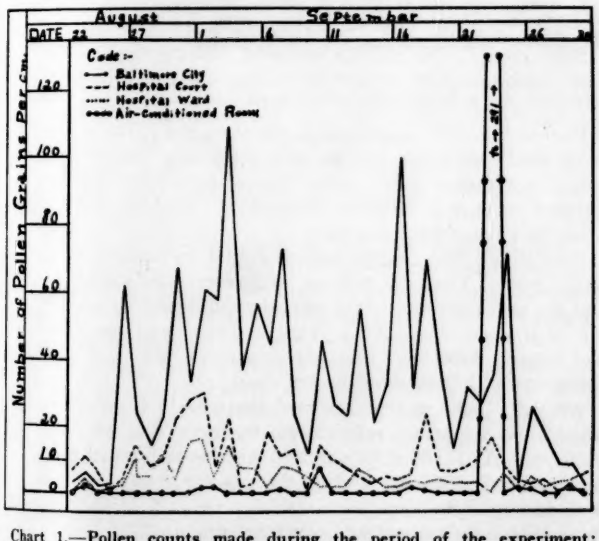

Chart 1.—Pollen counts made during the period of the experiment: Attention is directed to the high peaks of the pollen count found on the Baltimore City slide. This slide was placed in an area less protected by buildings than the slide placed in the hospital court.

there was a striking improvement in their general condition (protocols 1 and 2).

The next step in the experiment was to observe the effect of hospitalization of patients who suffered with hay fever or pollen asthma. The patients who had ragweed hay fever improved rapidly on admission to the room and in one hour were free from symptoms. They experienced no discomfort whatever for a period of forty-eight hours during which time they were confined to this room. The patients who had pollen asthma suffered for the first fifteen hours with moderate wheezing; however, the symptoms were quite mild compared with the hours of discomfort previous to admission to the air-conditioned atmosphere. After thirty-six hours, these patients slept comfortably throughout the night and, although there was occasional coughing, the result of this therapeutic measure was most satisfactory.

The fourth step in the experiment was to determine the effect of this room on individuals who spent the night in the room but who went into the outside air

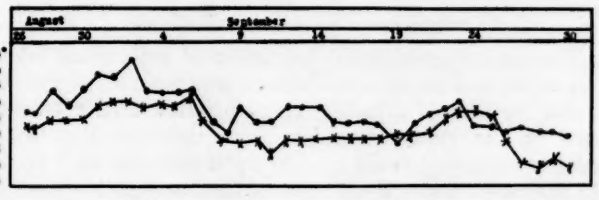

Chart 2.—Comparison of ward temperature (dots) and air-conditioned room temperature (x's) at a fixed time (9 a. m.). The close comparison of the readings suggests that the temperature alone is not responsible for the comfort of the patients.

occasionally during the day. One could at will cause a return of symptoms by sending the patient into the outside air and then relieve the symptoms by having the patient return to the room (protocols 3 to 8).

Controls, of course, were constantly available during the time these patients were in the room. Other patients in the clinic who had not been given the routine treatment of desensitization suffered continuously. One can therefore say that individuals with pollen asthma and pollen hay fever can be greatly relieved of their symptoms if they can spend their time in an air-conditioned atmosphere. The economic factor is, of course, a consideration.

The relief of patients by this method depends primarily on the cleansing of the atmosphere and secondarily on the chilled air that is inhaled. Chilled air with pollen, however, will produce as severe symptoms as warm air saturated with pollen. This feature was demonstrated by cutting off the cooling apparatus of the equipment and by continuing the fan, which did nothing more than circulate the air continuously for twenty-four hours, and which, because of nonfunctioning of the cooling apparatus, did not remove pollen granules. A group of four patients, free from symptoms after having been in the air-conditioned atmosphere for twenty-four hours, complained bitterly of hay fever and asthma while the fan circulated the air without the aid of the cooling and condensing apparatus.

In chart 2 a comparison of the temperature in the air-conditioned room with the temperature in the ward shows that at 9 o'clock in the morning the ward temperature paralleled closely the temperature in the room. The difference in the two atmospheres was simply the difference between an atmosphere free from pollen and an atmosphere that contained pollen. In the Hygro-Thermograph charts, comparison between the temperature and the humidity in the room with the temperature and humidity in the ward was recorded. These charts were maintained throughout the entire period of the experiment from August 22 to October 1. Each day the instrument was taken from the air-conditioned room and kept in the ward from 12 o'clock noon until 2 p. m. An elevation in both temperature and humidity was demonstrated by the graphic lift of the needle at the mentioned time. On the same chart the United States Meteorological Record was recorded. The maintenance

of even temperature and humidity in the air-conditioned room was striking compared to outside atmospheric conditions.

The treatment of individuals suffering with bacterial asthma was unsuccessful in air-conditioned atmosphere. These patients were sufferers of severe asthma of perennial type due to bacterial infection in the upper respiratory tract. Protocols of these patients (cases 9 and 10) show that they had increased symptoms within a few hours after admission to the room and they were finally discharged more uncomfortable than when they were admitted for treatment.

SUMMARY AND CONCLUSIONS

The experiments in the treatment of pollen hay fever and asthma with air-conditioned atmosphere represent a new method of attack. The efficiency of the system used in the experiment has been demonstrated with most satisfactory results. The apparatus not only cools the atmosphere but cleanses it of dust and pollen grains. Even temperature and humidity were readily maintained throughout the period of the experiment.

Complete relief was given to patients suffering with symptoms of hay fever, whether they occupied the room for several hours or for longer periods of time. Striking relief was given to patients suffering with pollen asthma within twelve hours after admission to the room. Control cases did not respond in a satisfactory manner; in fact, by occupying this room the symptoms were increased. The relief of patients apparently depends not only on the cooling of the atmosphere but also and chiefly on the fact that the atmosphere is cleansed of the offending agents.

Unfortunately, when patients were discharged from the room to the outside atmosphere their symptoms returned with equal severity. For economic reasons, therefore, in the average individual suffering with hay fever the method is as yet not satisfactory, but to those individuals who can afford to install such a system, whether in their home or in their office, great relief can be offered.

PROTOCOLS

PROTOCOL 1.—Ten patients suffering with severe symptoms of hay fever were admitted to the air-conditioned room at 10 a. m., Aug. 29, 1932. Their symptoms were referable to the eyes as well as to the nose. Within fifteen minutes, striking improvement was observed by the patients and after one hour the patients' symptoms practically subsided. After discharge from the air-conditioned room, the patients were observed and their symptoms returned within one hour.

PROTOCOL 2.—Ten patients who came to the dispensary complaining of both asthma and hay fever were admitted to the air-conditioned room at 10 a. m., August 31. In this group the eye symptoms seemed to be more disturbing than the rhinitis, and at the same time several of them were quite asthmatic. By 12 o'clock noon, all symptoms had subsided and the patients were quite comfortable. Two asthmatic subjects still continued to cough. After discharge from the air-conditioned room, the patients were observed and their symptoms returned within one hour.

PROTOCOL 3.—S. D., a woman who had suffered with hay fever for many years, was admitted to the air-conditioned room at 3 p. m., August 29. Her chief symptoms were referable to the eyes and nose. She was quite miserable. At 5 p. m. relief was striking. She spent the night in the hospital free from symptoms. On discharge from the room the following morning, her symptoms immediately returned.

August 30, she returned to the room at 3 p. m. with severe nasal and eye irritation. Within an hour her symptoms had again subsided. She spent the night free from symptoms and was discharged at 11:30 a. m., September 1. Within fifteen minutes after leaving the room she complained of recurrence of symptoms and there was slight oppression in her chest.

PROTOCOL 4.—S. O., a woman, came to the dispensary complaining of excessive eye and nose irritation, shortness of breath and persistent coughing, which caused slight asthma. She was admitted to the air-conditioned room at 12 noon, August 29. She noted relief of symptoms at 12:30 and complete relief at 2 p. m. During the night she had considerable sneezing, cough and some wheezing, although much less than the previous night at home.

August 30, at 3 p. m., all nasal and eye symptoms had subsided. She had a splendid night and remained in the hospital until 11:30 a. m., August 31.

September 2, she reported to the dispensary, having been miserable since discharge from the hospital. Curiously enough, however, her symptoms were limited to the nose and eyes.

September 7, she reported again with a similar history—very persistent nasal and eye symptoms but no asthma.

PROTOCOL 5.—E. N., a woman, came to the hospital in extreme distress due to pollen asthma. She gave a history of having had recurring attacks of pollen asthma for a number of years. She was admitted to the air-conditioned room at 2 p. m., August 31. Her nose and eye symptoms made her very uncomfortable and she was in a typical asthmatic attack. No medication was given. At 4:30 p. m. no apparent change was observed by the patient excepting that she had less irritation of her eyes.

September 1, the patient stated that her nose symptoms persisted most of the night. Her asthma, however, did not disturb her, although she was still wheezing when seen in the morning. At 4:30 p. m. she reported that her day was much more comfortable. She was comfortable most of the morning and the greater part of the afternoon.

September 2, the patient reported that she slept throughout the night. She had no nasal symptoms but there was some cough and expectoration. Her general appearance was much improved and she volunteered the information that she "felt fine."

September 3, rather against advice, she decided to leave the hospital. She was in excellent condition.

September 7, the patient returned, stating that, while the nasal symptoms were rather disturbing, she had been free from asthma since discharge from the air-conditioned room.

PROTOCOL 6.—S. F., a woman, came to the dispensary in an acute attack of pollen asthma with disturbing symptoms in the upper respiratory tract. She was admitted to the air-conditioned room at 4:30 p. m., August 29. At 5 o'clock, striking relief was noted by the patient.

August 30, the patient reported that her night had been rather poor. The nose and eye symptoms were very persistent and she had a definite attack of asthmatic breathing on awakening in the morning. At 3 p. m. her nose and eye symptoms had entirely subsided. She felt very much improved, although there was still "tightness" in her chest.

August 31, the patient reported that she had had a splendid night. No symptoms referable to the eyes, nose or lungs had occurred. At 11:30 a. m. she left the air-conditioned room and returned at 3:30 p. m. During the entire period of absence her nose and eye symptoms were very severe. When she returned, these symptoms cleared up within ten minutes.

September 1, the patient had a severe attack of asthma at 4 a. m., requiring several ephedrine capsules to bring about relief. When examined at 9:30 a. m. she was suffering considerably and there was a great deal of expectoration. During the morning her symptoms subsided and she fell asleep, resting comfortably until 4:30 p. m. free from all symptoms on awakening.

September 2, the patient stated that she had had a splendid night free from all symptoms. The patient insisted on going home for the day. She was discharged from the air-conditioned room at 10:30 a. m.

September 3, the patient was readmitted to the hospital after having spent a miserable night marked by recurring attacks of asthma. Ephedrine failed to relieve her.

September 4, she stated that her night in the hospital had been free from symptoms excepting a moderate amount of cough. There were no nasal symptoms.

September 5, she was free from symptoms.

September 6, mild asthmatic breathing was noted at 4 a. m.

September 7, 8 and 9, the patient remained in the hospital, free from all symptoms excepting for short visits during the day to friends in the neighborhood of the hospital. September 8, she went to her home, remaining for several hours, during which time she had a very severe attack of hay fever. The hay fever symptoms cleared shortly after readmission to the air-conditioned room.

The patient then decided to return to her home for several days but was so miserable that on September 12 she returned to the air-conditioned room. Her first night in the hospital was quite uncomfortable. She decided, however, to stay in the room for ten days and was finally discharged, September 22, in excellent condition, free from all asthma and symptoms of hay fever.

September 26, she returned to the dispensary with a history of having had no asthma and only mild symptoms of hay fever.

PROTOCOL 7.—E. P., a woman, had suffered with hay fever and pollen asthma for a number of years. She was admitted to the air-conditioned room, September 7, with considerable respiratory distress. Her hay fever began on August 25 and her asthma on September 1. Within several hours after her admission to the room the asthma was relieved, but the sneezing persisted for a number of hours. The patient, who was a nurse, returned to duty on the morning of the 8th.

September 9, she returned to the air-conditioned room in considerable distress.

September 10, she was again admitted to the room, having been on duty for twelve hours. The attack of asthma was so severe that epinephrine was necessary. It was then decided that she should remain in the air-conditioned room for several days without returning to duty.

September 11, she had had a very good night and slept for practically the entire twenty-four hour period.

September 12, for the first time in months, she was able to sleep flat on her back and in general there was striking improvement. Examination of her chest still showed numerous râles.

September 13, she had had an excellent night. She had been free from symptoms during the night, but some nasal and eye irritation occurred during the morning.

September 14, she was free from all symptoms.

She was discharged from the hospital, September 15, in excellent condition.

PROTOCOL 8.—E. K., a woman, had had pollen asthma and hay fever for several years. Persistent symptoms began on August 15 and she had been miserable previous to admission to the air-conditioned room on September 7. She was admitted to the room at 4 p. m. and relief was noted at 5 o'clock.

The patient remained until September 19. Her general condition improved remarkably excepting that her chest showed persistent râles for a number of days. These râles were of a wheezing inspiratory and expiratory character. The patient also had a rather persistent cough of about four days. For the first two days of her confinement, she had miserable sneezing and rhinitis controlled with ephedrine. From September 11 until discharge her nights were very comfortable and the slight cough of which she complained was controlled with small doses of codeine.

On discharge from the air-conditioned room, she was comfortable for twenty-four hours. During the latter part of September she reported from time to time with considerable hay fever and cough but no further attacks of asthma.

PROTOCOL 9 (control case).—A woman had been under treatment for a number of years with asthmatic bronchitis, the etiologic factor being bacterial infection. She was admitted to the air-conditioned room, September 8, remaining under observation until September 11. No relief was noted during her stay in the hospital. On each night she had an attack of asthma lasting from three quarters of an hour to two hours. She was discharged unimproved; in fact, during her sojourn in the air-conditioned room she was much more uncomfortable than during the previous two months.

PROTOCOL 10 (control case).—W. S., a man who had been under observation for seven years, suffered with severe attacks of asthma. He was admitted to the air-conditioned room on September 16 at 12 noon. No relief was observed at 4:30 p. m. During the night, three doses of epinephrine were required to give him relief. In spite of this his chest was full of râles and he complained of extreme tightness.

On the night of the 17th, he again required two injections of epinephrine. His day was quite uncomfortable and the night equally bad.

On the 18th and 19th, his nights were so severe that additional doses of epinephrine were given, but without producing relief.

On the morning of the 20th he was discharged from the room in miserable condition, much worse than on the day of admission.

THE EFFECT OF AIR FILTRATION IN HAY FEVER AND POLLEN ASTHMA

FURTHER STUDIES

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During the autumnal hay fever season of August and September 1932, further studies were carried on to determine the effects of filtered air on patients suffering from autumnal hay fever and hay asthma.[1]

In this experiment the air for the eight bed ward was filtered by two special machines manufactured by the American Air Filter Company. In accordance with the suggestions made as a result of our experience last year, two filters were installed in each machine through which the air passed in series. Each of these filters had an effective filtration surface of 22 9/10 square feet. Four ply cellulose filters were used with the exception of a short time when Eastman cloth, a woven cotton material, was substituted. The Sirocco type blower was used for moving the air. When the filters were clean, each machine had an approximate capacity of 800 cubic feet per minute. The machines were installed outside the room to overcome the objections of some of the patients that the operating hum of the motor disturbed their sleep. A small filter unit, manufactured by the American Air Filter Company under the name of Airgard, was used to circulate and refilter the air in the ward.

In the four bed ward two filter machines, manufactured by the Independent Air Filter Company, were used. Each machine had a capacity of approximately 450 cubic feet per minute. A Sirocco type blower was used to move the air. Both the motor and the blower were mounted on resilient springs to eliminate noise. In this machine a single filter of high grade wool felt was used. It had an effective filter area of about 20 square feet.

The cooling unit that was used in the four bed ward was of sufficient capacity to reduce the temperature 10 degrees F. below that of the incoming air. The installation was lent to the university for this experiment by the Frigidaire Sales Corporation.

From the Departments of Medicine, Pathology and Physiological Chemistry, University of Illinois College of Medicine.

1. Rappaport, B. Z.; Nelson, Tell, and Welker, W. H.: Effect of Air Filtration in Hay Fever and Pollen Asthma, J. A. M. A. **98**: 1861 (May 28) 1932.

The machines were started on August 11, four days before any patients were admitted. The rooms were thoroughly cleaned by scrubbing before the experiment was begun and were washed each day thereafter with damp cloths. Pollen counts were made daily from several locations: (*a*) an outdoor count on the porch on which the machines were placed, (*b*) in various locations in the wards and in the control rooms of the same size and location in the building, (*c*) in the outlet ducts of all the machines, (*d*) at the intake ducts of the larger machines where the pollen laden air struck the first filter, and (*e*) in the transom where most of the air escaped from the room. The method of counting was that used in the National Ragweed Survey,[2] 1.8 sq. cm. being used as the unit area counted as representing the pollen in a cubic yard of air. It will be observed that

TABLE 1.—*Pollen Counts Per Cubic Yard of Air*

Date	East Filter Cool Room	West Filter Cool Room	Cool Room Settling Count	West Filter Warm Room	East Filter Warm Room	Warm Room Settling Count	Outdoor Settling Count	Control Room Settling Count	Intake Ducts	Transom Warm Room
Aug.										
15	4	..	11	0	0	15	25	40	...	..
16	2	..	13	0	0	6	61	32	...	..
17	2	..	4	0	0	10	60	24	...	..
18	10	..	14	1	0	6	48	56	...	..
19	1	..	6	0	1	8	89	18	...	..
20	3	..	2	0	2	3	69	39	...	..
21	0	..	11	4	0	5	312	78	...	..
22-23	4	..	8	16	3	10	375	114	...	..
24	9	0	16	2	6	15	328	171	...	..
25	3	8	10	1	1	2	334	180	...	..
26	1	5	6	6	12	12	341	147	...	..
27	4	3	4	0	0	6	325	82	...	..
28	3	4	18	2	3	7	378	135	...	..
29	4	1	10	1	0	3	543	177	...	..
30	6	4	13	3	2	5	633	299	...	..
31	11	3	8	2	2	18	699	189	...	..
Sept.										
1	11	1	18	0	5	15	72	63	...	..
2	7	1	5	0	0	4	174	54	...	..
3	0	0	5	0	1	2	40	22	...	..
4	0	1	1	1	0	2	70	34	112	2
5	0	6	6	0	0	6	440	192	720	5
6	1	2	6	0	2	3	144	11	212	1
7	10	9	3	1	0	5	108	30	...	5
8	25	11	42	2	0	4	70	64	102	2
9	2	2	4	0	0	7	195	36	276	8
10	2	4	9	0	1	10	62	26	68	4
11	2	2	5	0	0	3	78	38	112	10
12	0	0	4	0	0	2	402	62	408	34
13-14	2	3	6	2	0	5	330	108	294	8
15	0	0	8	0	0	2	134	62	147	18
16	0	1	7	0	0	7	82	19	117	13
17	0	2	4	0	0	2	57	30	84	11
18	0	0	2	0	0	5	135	16	228	5
19	0	0	3	0	0	2	151	31	192	6
20	1	0	3	0	0	11	26	16	71	15
21	0	0	1	0	0	3	11	5	15	5
22	0	0	2	0	0	3	13	6	39	..
Total	130	72	298	44	41	134	7,414	2,636		

two types of counts were made, one a settling count and the other a count in moving air currents of different velocities (table 1). Although we used the same method of counting the slides whether in moving or in settling air, the counts are not comparable, since those made in the moving air currents do not represent the amount of pollen in a cubic yard of air. From our observations we do not believe that a comparison between counts taken in the outlet ducts (moving air) and outdoor counts (settling counts) furnishes an accurate index of the efficiency of the filters. Such comparisons lead to inaccurate conclusions regarding the efficiency of the filters under observation. Many variable factors are operative in moving air, as, for example, (*a*) the speed of the current of air, (*b*) the "dead spot" of the current, (*c*) the distance of the exposed slide from the filter, (*d*) the proportionate size of the slide to the size of the filtering surface, and (*e*) the proportionate size of the exposed slide to the size of the outlet ducts. Our counts on the slides placed at the outlet ducts (moving counts) were much lower than the counts taken in other parts of the room (settling counts). It was observed that most of the pollen grains on the slides from the outlet ducts were along the edges. This may be due to a disturbance of the air current by the interposition of the slide.

The highest count observed in the large ward was 18 grains per cubic yard of air for twenty-four hours. On only six days of the total of thirty-eight was the count above 10 grains. In the smaller ward where felt filters were used there were nine days when the count was above 10 grains. One of these was a count of 42 grains on September 8, when due care was not exercised in changing the filters.

Filters should be renewed sufficiently often to insure a constant flow of air. From table 2 it is noted that the filtering efficiency was greatly reduced when the filter pores become clogged. Another factor that should be considered is the "sifting" of pollen through a filter by the vibration of the motor and fan. This mechanical vibration should be eliminated as completely as possible.

As we observed in our work last year, there was no tendency for the pollen concentration in the room to follow the pollen curve outdoors. It is interesting to note that during the first six days of the experiment, when the outside settling count varied from 25 to 89 pollen grains per cubic yard of air with a total count of 352 grains, the settling count in the large ward totaled 48 grains (table 1). From August 26 to August 31, the first high peak of the season, while the outside counts varied from 325 to 699 grains per cubic yard, with a total of 2,919 grains, the counts in the room totaled only 51 grains. In the first period the filtering efficiency, compared with the outside counts, was but 86.37 per cent, while in the second period an efficiency of 98.26 per cent was attained. During the same two periods the total counts in our control room were 209 and 1,029 grains, respectively. In comparison to the control room, the efficiency of the machines was found to be 77.04 and 95.05 per cent, respectively. It is difficult to explain why there was more pollen in the rooms during the early part of the season, unless four days of constant filtration may not be sufficient to rid even hospital rooms with no carpets or draperies of all the pollen that they contained. It is more difficult to explain this when one considers that the moving air current counts for the two periods totaled 4 and 33 pollen grains, respectively. Our patients, however, were relieved as promptly of their hay fever symptoms during the first period as during the second. We feel that we cannot come to any accurate conclusion as to the amount of pollen necessary to precipitate attacks of hay fever. This is undoubtedly a highly variable factor and depends on the degree of sensitivity. From our experience we can state that when there are no other factors operating, such as weather changes, settling counts up to 18 grains per cubic yard are not a hindrance to hay fever patients in obtaining prompt relief from their symptoms.

During the entire period of observation, the filtering efficiency of our filters was as follows: In comparison to the amount of pollen outside, the filters in the large ward had an efficiency of 98.20 per cent. Compared to the counts of the control room, the efficiency was 94.92 per cent. In the smaller cooled ward the efficiency, based on outdoor pollen counts and on the control room, was 95.98 and 88.70 per cent, respectively.

2. Durham, O. C.: Incidence of Ragweed Pollen in United States During 1929, J. A. M. A. **94**: 1907 (June 14) 1930.

We believe that no pollen filter on the market at present can claim 100 per cent efficiency for pollen. Such descriptions have not only been used in lay advertisements of this type of apparatus but have even crept into the medical literature. Beck,[3] in describing the commercial filter used in obtaining her data says, "This filter, after being subjected to rigid laboratory tests, was found to render the air of the room in which it was installed one hundred per cent free of pollen." The type and duration of the laboratory tests are not mentioned. It is not stated whether pollen was merely suspended at the intake duct and slides were exposed at the outlet duct for a period of minutes or hours or whether the machine was tried out during a pollen season. The former method of determining the efficiency of a filter, which is the one commonly used, does not indicate the true efficiency of the filter. That does not take into account the reduction of the effective area of the filter surface by the clogging effect of dust particles with the resultant increase of the velocity of the air flow through the remaining filter area. This increase in the rate of air flow undoubtedly results in pollen being carried through the filters. In addition, the type of test that does not take into account the effect of the sifting of pollen through the filter as a result of the vibration produced when the machine has been run for a sufficient length of time is not a true test of the efficiency of the filter. The only type of test to be recommended for determining the filtering efficiency of a filter involves its actual use for a period of at least one week during the season.

TABLE 2.—*Anemometer Readings and Air Changes in Uncooled Ward*

Date	Total CFM*	Air Change Minutes	Comment
Aug. 11.....	1,600	4.7	Machines started with paper filters
Aug. 24.....	800	9.4	Before change of filters
	1,100	6.8	Eastman cloth put in top stages
Aug. 30.....	800	9.4	Before change
	1,600	4.7	Paper filters put in top stages
Sept. 4.....	1,450	5.2	Before change
	1,600	4.7	New paper filters put in top stages
Sept. 7.....	1,450	5.2	
Sept. 8.....	1,400	5.7	Before change
	1,600	4.7	New paper filters put in top stages
Sept. 13.....	1,306	5.7	Before change
	1,500	5.0	New paper filters put in top stages
Sept. 17.....	1,350	5.5	Before change
	1,500	5.0	New paper filters put in top stages
Sept. 23.....	.....	...	Filter shut down

* In this column CFM indicates cubic feet per minute.

TABLE 3.—*Pollen Counts at Outlet Ducts (Grains per Cubic Yard for Twenty-Four Hours)*

Date	Aug. 27	Aug. 28	Aug. 29	Aug. 30	Aug. 31	Sept. 1	Sept. 2	Filtering Efficiency,* per Cent
Filter unit 1.....	13	1	11	No slide	7	5	14	97.63
Filter unit 2.....	No slide	4	14	5	16	4	1	97.33
Filter unit 3.....	3	6	2	No slide	5	2	4	98.73
Outdoor pollen count (Chicago loop, O. C. Durham)	214	493	258	131	502	77	183	

* The filtering efficiency of these filters is based on the ratio of pollen counts at the outlet ducts (moving count) to outdoor pollen counts (settling count). As previously noted in this study, such comparisons are misleading. However, no settling counts in the filtered air rooms were made for comparison with the outdoor counts.

We examined slides exposed 1 inch away from the outlet ducts of the latest types of three different filtering units manufactured by different companies. The filters were installed in offices in the Chicago business district, where the pollen concentration is decidedly lower than in the residential districts. In spite of this, as is shown in table 3, none of the filters could be called 100 per cent efficient. Filter unit 1 is the one described by Beck [3] in her study. As shown in table 3, an average of 6 grains of pollen per cubic yard for twenty-four hours was admitted through this filter during the six days that pollen counts were made.

The average number of pollen grains per cubic yard for twenty-four hours admitted by filter 2 was 7.33, and by filter 3, 3.66. The filtering efficiency of each of these units for the six day period was 97.63, 97.33 and 98.73 per cent, respectively. This, however, was determined by a comparison of the pollen count at the outlet ducts (moving count) with the count outdoors (settling count), as no settling pollen count was made in the rooms equipped with these filters. Based on such a comparison, the filtering efficiency of the four experimental filters used in our wards was 98.25, 98.88, 99.41 and 99.45, respectively. As we have previously mentioned, however, this is not the method to be used in evaluating the efficiency of a filter.

The air in the larger ward was completely changed every five minutes at the beginning of the experiment. When the time required for such a change increased to seven minutes or longer, discomfort was complained of. It was found advisable to keep as constant an air delivery as possible. We believe that an air change between five and six minutes in our large ward of 7,500 cubic feet was sufficient for the comfort of our patients. The feeling of oppression, which is present when large volumes of air are pumped into a closed room, was entirely relieved by opening a transom leading to an adjoining hallway.

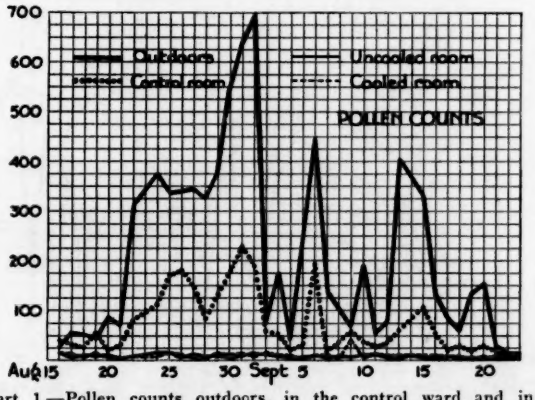

Chart 1.—Pollen counts outdoors, in the control ward and in the filtered air wards.

During the entire period of the experiment, it was our observation that there was a higher relative humidity in the cooler room than in the larger ward and that, although the patients were more comfortable as far as temperature was concerned, their symptoms were not as promptly relieved in the cool room as in the uncooled ward (chart 1). The comfort of the patient is not entirely due to adequate ventilation and to comparatively pollen free air but is dependent on such physical factors as the change in temperature and relative humidity. With a temperature difference of 10 degrees between the outdoors and the cooled room, patients complained of a feeling of chilliness, even with indoor temperatures of 75 F.

It is our opinion that when such factors as air volume and pollen concentration are controlled, rapid atmospheric changes of wide amplitude can produce charac-

3. Beck, Isabel: M. J. & Rec. **136**: 90 (Aug. 3) 1932.

teristic symptoms, especially in asthmatic patients. This will be discussed later.

Seventy-six patients were selected from a large group of applicants. Patients with average intelligence and with typical symptoms of hay fever and with skin tests positive to ragweed pollen were chosen. They were classified into two groups: (1) cases of hay fever and (2) cases of pollen asthma.

Hay fever patients were observed from three to seven days, and those with asthma from four to twenty-one days. All patients were interviewed and examined morning and evening. All remained in the filtered air until relieved of their symptoms both subjectively and objectively. The uncomplicated hay fever patients were permitted to go out for twelve hours the first day. This period was decreased one hour each day, until on the fourth day they remained in the ward for fifteen hours. A room was provided for the removal of outer garments, and only such clothing as night attire and bath robes were permitted in the wards. Every precaution was taken to prevent bringing pollen into the ward on the clothing. We feel that this may in many instances defeat the efficiency of filtration.

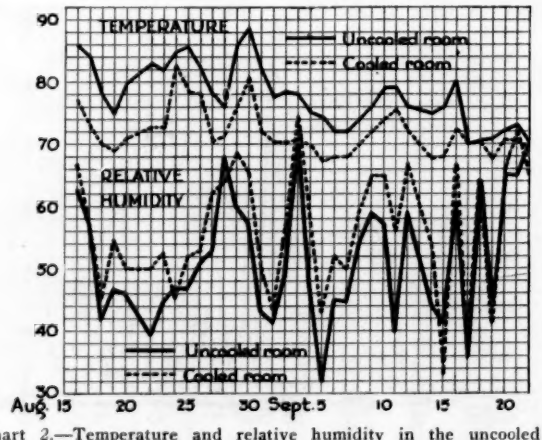

Chart 2.—Temperature and relative humidity in the uncooled and in the cooled wards.

This factor is difficult to control whether in an experimental ward or in the home. It is impossible even by changing clothing to prevent this completely. We even found that some pollen may be carried on the hair of persons entering the rooms. The difficulty is even greater in homes where rugs, upholstered furniture and hangings that cannot be removed may contain large quantities of pollen, which will be constantly stirred up by the air current. The installation of four portable filters to refilter the air in the large ward was probably of great help.

Precautions should be taken when dealing with female patients to remove all face powders and cosmetics before they enter the room. We observed that our slides showed very little pollen, dust and lint early in the experiment. Some of the patients in an adjoining ward required lycopodium as a medicament. Although none of our patients came in contact with this drug, we nevertheless found granules of lycopodium on our settling counts both in the control and in the experimental rooms. These probably were carried into the room on clothing of patients and attendants. None were found on slides exposed outdoors or in the outlet ducts. This observation served as a clue of the relative amounts of pollen grains brought into the room through other means than the filter.

Studies were made to determine the time required and the degree of relief afforded by filtered air, both in the patients with uncomplicated hay fever and in the patients with pollen asthma. In addition, studies were made to determine the time required for symptoms to reappear on exposure to outside air, after confinement in filtered air for varying periods of time.

OBSERVATIONS

Forty-one patients with hay fever of the autumnal type and with positive skin reactions to the Ambrosia group of pollens were observed for an aggregate of 184 nights. Some patients spent only one night in the ward and were not included in our studies. Our observations were intended to answer several questions:

1. What is the length of time required to obtain the maximum degree of relief? The average time required for maximum relief from hay fever symptoms on the various days of the experiment is shown in chart 2. It will be noted that, on days when the pollen content of the air was high, the time required for relief was greater than on days when the pollen concentration was lower. The average time required for maximum relief of symptoms regardless of their severity on entering the ward was 2.3 hours. The degree of maximum relief expressed in percentage of patient nights was as given in table 4.

TABLE 4.—*Degree of Maximum Relief*

	Number of Patients	Percentage of Total Patients
Complete	30	16.3%
Great	66	35.9%
Slight	62	33.7%
No symptoms on entering	22	11.9%
No relief	4	2.2%

From these figures it is noted that our patients were afforded more than 50 per cent of complete or great relief in the ward. The four instances of no relief are interesting and difficult to explain. The first occurred on August 18, with an outdoor pollen count of 48 pollen grains per cubic yard. It was preceded and followed by two nights with complete relief. The second instance came on August 22, with a pollen count of 375. This was the last night in the ward for this patient. All others that night had either complete or great relief. This patient had had great relief the preceding seven nights, but the symptoms on the last day, although coming on three hours after the patient left the ward, were very severe. The third unrelieved patient had a similar experience on the last night in the ward after a week of great or complete relief. The symptoms during the day had been very severe and came on two hours after the patient left the ward. The pollen count on this day was 543. The fourth patient came in with severe symptoms and had no relief on the first night of her stay, after a day in which the pollen count was 144. Although no relief was obtained the first night, symptoms gradually subsided the next day, and even though she was permitted to go outdoors for

TABLE 5.—*Degree of Symptoms*

	Number of Patients	Percentage of Total Patients
No symptoms	14	9.0%
Mild	31	20.0%
Moderate	26	16.7%
Severe	84	54.2%

the usual periods she did not have any symptoms during the next two days.

We believe that the time required in filtered air for the maximum degree of relief depends on two factors: first, the severity of the symptoms as determined by the degree of sensitivity, and, second, the dosage of pollen that the sufferer has come in contact with during the day. The degree of relief depends on the same factors.

2. How soon do symptoms reappear on exposure to pollen laden air? The average time required to bring on symptoms on exposure to pollen laden air was 2.06 hours. Table 5 shows the degree of symptoms expressed in patient days.

It is interesting to note from chart 2 that the time necessary for the onset of symptoms is inversely proportional to the pollen concentrations. The higher the pollen concentration, the more severe are the symptoms. No difference in either the rapidity of the onset of symptoms or in their severity was noted following various periods of constant residence in filtered air. Patients were kept in the room for varying periods of time, from ten to sixty-eight hours, before being exposed to unfiltered air. It is interesting to note the time required and severity of symptoms in six patients who had been continuously confined in the room thirty-six hours or more, and who had been symptom free when they left (table 6).

TABLE 6.—*Time Required and Severity of Symptoms in Six Patients*

Patient	Hours in Ward	Outdoor Pollen Count*	Time of Onset	Degree of Symptoms
1	36	61	1 hour	Slight
2	40	108	None	None
3	43	328	None	None
4	51	70	2 hours	Severe
5	67	195	3 hours	Slight
6	68	72	¼ hour	Severe

* Outdoor pollen count on day patient was permitted to go out.

We believe that the rapidity of the onset of symptoms on exposure to pollen is dependent on the pollen concentration regardless of the length of time for which a patient has been confined to the filtered air rooms. This is in keeping with our observations of last year. A longer period of exposure to pollen is required to bring on symptoms during the latter part of the pollinating season. This, we believe, is not due to a tolerance gained to pollen but rather to a lower pollen count (chart 2).

It is a fallacy to believe that residence in filtered air renders a patient less susceptible to pollen to such a degree that he will not have symptoms when subsequently exposed to pollen.

3. What is the effect of cooled filtered air on the time required for relief and the degree of relief? Of the entire group studied in both rooms, 72.8 per cent were relieved of their symptoms in three hours or less. In the cooled ward, the proportion was only 61.1 per cent, while in the uncooled ward it was 76.9 per cent. Several of the patients were shifted from one ward to another during their stay in the hospital. All stated that the degree of relief in the uncooled ward was greater and the time necessary for this relief shorter than in the cooled ward.

There were 104 instances of patients awakening during the night because of symptoms, such as sneezing. The majority of these attacks occurred in the early hours of the night. In practically all instances they were mild.

In general, we can state that relief of more than 50 per cent of symptoms of hay fever can be obtained by filtered air in three hours or less. The time of onset of symptoms after exposure to pollen is apparently not related to the length of residence in filtered air but depends on the pollen concentration and on the degree of sensitivity of the patient. The addition of cooling to the filtration does not seem to hasten the relief or increase the degree of relief obtained.

Of the thirty-five untreated pollen-asthma patients selected for observation, eighteen were studied for four days or less, and seventeen for periods of from six to twenty days. Of the eighteen who were studied for four days or less, eleven left the ward within forty-eight hours after admission, dissatisfied with the degree of relief that they had obtained. Since they did not remain long enough for a satisfactory study, they are not included in our report or in the results given in table 7.

Our study was intended to answer several specific questions:

1. Will the asthma patient be relieved by confinement in filtered air? If a patient with uncomplicated pollen asthma is strictly confined for a long enough time to a room equipped with an adequate filter, his subjective asthma will clear up. The objective signs of the asthmatic condition, that is, wheezing and prolonged expiration present on examination of the lungs, are not so easily relieved. All the patients who remained more than forty-eight hours in the ward were relieved. The subjective symptoms cleared up completely in a few of the patients and became much milder in the others. The objective signs of asthma had disappeared in only five of the thirty-five patients when they left.

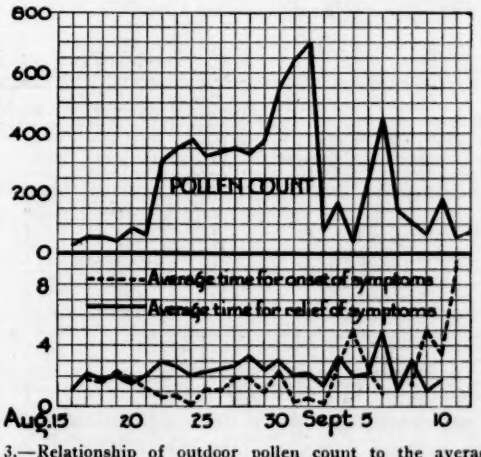

Chart 3.—Relationship of outdoor pollen count to the average time required for relief of hay fever symptoms in filtered air and for the onset of symptoms on exposure to pollen.

2. How long should a patient be strictly confined to the filtered air before he is permitted to go outdoors? From studies based on seventeen patients who were observed for periods of six days or more, no definite statement can be made concerning the length of the primary period that a patient should be strictly confined to the ward. The length of this period is determined solely by the severity of the attack. When patients who had had no subjective asthma on the previous night were permitted to leave the ward for a period of from six to eight hours, they would sometimes have an attack of asthma shortly after going out or more frequently that night after returning to the ward. While

this attack was usually milder than the condition present on admission, it was sometimes as severe as any attack of that season and would often require strict confinement to the ward for as long as several days before it cleared up.

It is very likely that in general only persons with severe asthma volunteered for our work and that many sufferers from mild asthma require a preliminary confinement period of only twenty-four hours or possibly less. There are, however, more severe pollen asthmatic states than those we studied, as those described by Kahn,[4] who required constant confinement of much longer periods. In his report of a group of asthma patients in Texas, he mentions twelve days of constant residence needed by one patient, from one to two months by others, and as long as five months by one individual. With such variations, one must decide cautiously when one is to permit the patient with asthma to go outdoors. One must base the decision on the absence of subjective asthma the previous night and on the presence of only slight or, better still, no wheezing over the lungs.

Our observations on this question do not agree with those of Beck,[3] who states that patients with pollen asthma improve as rapidly when confined to filtered air as those having uncomplicated hay fever. The hay fever patients observed by us improved more rapidly than the asthma patients. Beck reports that eight of sixteen asthma patients obtained relief in twelve hours. None of our patients obtained relief in less than forty-eight hours.

We consider it a fallacy to form an opinion of the degree of improvement of the asthmatic condition in less than twenty-four hours. It is a well established clinical observation that patients with asthma have more severe symptoms at night and frequently only at night. Such a patient will feel better with or without a filter in twelve hours, when morning comes. This was true in all except the most severe cases in the group that we observed. Unfortunately, Beck's conclusions were based on observations made only from the records of the patients with the machines used in the homes of these individuals. No mention is made in her report of the frequency with which each patient was examined by a physician for subjective and objective evidences of improvement.

3. For what length of time daily may such a patient be permitted to leave the filtered air? The length of time that a patient may be permitted to be out also cannot be determined by a set of statistics. For some individuals the exposure period necessary to precipitate an attack may be as brief as one-half hour, while others may tolerate exposure to pollen for as long as twelve hours. The tolerance period is markedly variable in the same patient on different days. On one day he may be able to be out for eight to ten hours, while on subsequent days, usually because of the increased pollen concentration outdoors, even less than an hour of exposure may be sufficient to cause an attack. Here again we differ with Beck,[3] who reports that patients with pollen asthma using a commercial air filter were able to be out for periods of from fourteen to fifteen and one-half hours daily. Those who came under observation at the height of the season were able to tolerate shorter periods of exposure to pollen than those who entered early in August or mid-September.

The twenty-four patients whom we studied were permitted to leave the ward when they had been free from asthma or had had only a slight attack the previous night. They were permitted to remain out of the room for periods up to ten or twelve hours but were instructed to return with the onset of severe hay fever or any symptoms of asthma. In table 7 we have divided the twenty-four patients observed for from three to twenty days into five groups, based on the duration of the primary period of confinement that was found necessary before the condition cleared up sufficiently to permit the individual to go out of the ward.

TABLE 7.—*Observations in Twenty-Four Cases of Pollen Asthma*

Period of Primary Confinement	Number of Patients	Average Number of Days of Observation	Average Number of Hours per Day Spent Out of Room	Total Number of Nights of Severe Asthma	Per Cent of Total Number of Nights of Observation	Total Number of Nights of Moderate Asthma	Per Cent of Total Number of Nights of Observation	Total Number of Nights of Slight Asthma	Per Cent of Total Number of Nights of Observation	Total Number of Nights of No Asthma	Per Cent of Total Number of Nights of Observation
1 day	6	7	4.9	9	21	5	11.9	12	28.6	16	38
2 days	5	8	4.5	10	25	3	7.5	12	30	15	37.5
3 days	5	11	2.4	13	23.6	10	18.2	15	27.3	17	30.9
4 days	4	7	1.7	6	21.4	6	21.4	6	21.4	10	35.7
5 days	1	5	0	5	100	0	....	0	....	0	0
6 days	1	20	1.0	7	35	2	10	7	35	4	20
7 days	2	9	1.0	4	22.5	4	22.2	3	16.6	7	38.8

As will be noted, those having the mildest asthma, who required only twenty-four hours of primary confinement, could go out for an average period of 4.9 hours a day. In the more severely affected, as the length of primary residence required increased, the average number of hours each day that the patients could remain out of the ward decreased. Those with the most prolonged and usually the most severe attacks could tolerate only an average of one hour a day exposure to pollen outdoors.

Those with severe asthma required a longer period of primary confinement and had more frequent night attacks in spite of confinement than those with mild asthma. In table 7 this is expressed in percentage of the total number of nights of observation.

The following history, which is typical of the patients with more severe asthma, illustrates the difficulty in determining the duration of the primary confinement period, and of the length of time that a patient may be permitted to go outdoors:

I. C., a woman, aged 47, admitted to the ward on September 2 and discharged, Sept. 22, 1932, had had autumnal asthma for thirty-three years, starting August 15. She had been kept awake from five to eight hours a night during the two weeks preceding her admission. On admission, the lungs showed marked evidence of asthma. She had only two hours of severe asthma the first night. She was confined to the ward for four days, during which her symptoms became milder but did not completely disappear. She awoke four or five times each night with mild attacks of asthma and hay fever.

4. Kahn, I. S., in discussion on Cohen, M. B.: J. Lab. & Clin. Med. 13: 963 (July) 1928.

September 6, after four days of constant confinement, she was permitted to go into the hall outside the ward for one hour. At the end of this period she had an attack of asthma which subsided slowly after she returned to the ward. The next day (the fifth in the ward) she was out for three and one-half hours. Symptoms of hay fever but no asthma developed. After she had been out for two hours the following day, slight hay fever symptoms began and continued all night, together with a moderately severe attack of asthma. In the morning, more wheezing was present over the lungs than on the previous day. She was out for one hour on September 10 with no asthma resulting. September 11 (the ninth day in the ward), she was out for eight and one-half hours. One-half hour after she left the ward, hay fever symptoms began. Six hours later, symptoms of asthma began. That night she had severe asthma for four hours, the worst since admission to the hospital. The following night, during a heavy rain, she and the five other patients in the ward had severe asthma lasting all night. This lasted for thirty-six hours with hardly any relief obtainable from epinephrine. The condition slowly improved and, after three days of strict confinement to the ward, no subjective asthma was present. The lung condition subsided even more gradually than the symptoms. She was out on September 16 for one-half hour with no ill effect but was confined strictly to the ward for the next two days because of the mild wheezing still present over the lungs. She had no subjective asthma during this period. In spite of this relative protection from pollen, a severe attack of asthma occurred the second night of this period. Two days later, September 20, she was able to be out for eight hours with no asthma. The following day, after being out for seven hours, she had a mild attack of asthma. She was discharged, September 22, with mild wheezing still present over the lungs but with no subjective asthma.

4. Will confinement in filtered air for a reasonable length of time each day prevent the onset of asthma in individuals who have developed pollen asthma in previous seasons? This is possibly one of the most important questions to be answered. Four patients were admitted before they had had any symptoms of asthma this season, two on August 15 and two on August 22. The first was permitted to be out for an average daily period of nine and five-sevenths hours. He developed asthma the fourth night of his confinement. The attack recurred on the following two nights.

The second, who was admitted on August 15, was out of the ward for an average daily period of nine and a half hours. He had his first attacks of asthma on the seventh and eighth nights of his observation.

The third patient was admitted on August 22. She also was permitted to go out for an average period of nine and a half hours daily. Her first asthma attack of this season occurred the fourth day of observation, six hours after she left the ward. It recurred the following day immediately after she left the ward and continued until the next morning. When it subsided, she again went out and had the same experience immediately after leaving. Another attack occurred the next night.

The fourth patient, admitted on the same day, was permitted to go out daily for an average period of ten and a half hours. An attack of asthma occurred the seventh night of her stay in the hospital.

To this group of four patients may be added a fifth, who previously had never had asthma. Wheezing and dyspnea developed the first night of her stay in the ward.

The occurrence of asthma in this group of patients who were permitted to go outdoors for daily periods of nine and a half to ten and a half hours indicates that the use of filters that are on the market today will not generally prevent the occurrence of asthma in hay fever patients. It is possible that if the individual is confined for a much longer period each day than thirteen and a half hours, or if the asthma is very mild, the early use of a filter may prevent its occurrence. It is significant that these were not a group of unrelieved patients. They were relieved as much of hay fever symptoms as the nonasthmatic hay fever patients previously discussed.

5. What is the effect of atmospheric changes on pollen asthma? In a preliminary observation from August 13 to August 15, four patients with hay fever and hay asthma failed to obtain relief in the room equipped with the refrigerating unit when the filter was not in use. Later observations with the use of filtration and refrigeration showed that, while many patients felt more comfortable in the cooled room on hot days, their dyspnea was not relieved either to a greater extent or more quickly than patients in the uncooled ward. Some patients who were transferred from the uncooled room complained of even more severe attacks of asthma in the cooled ward. We believe that the increased relative humidity of the cooled air aggravated the symptoms of asthma in some patients.

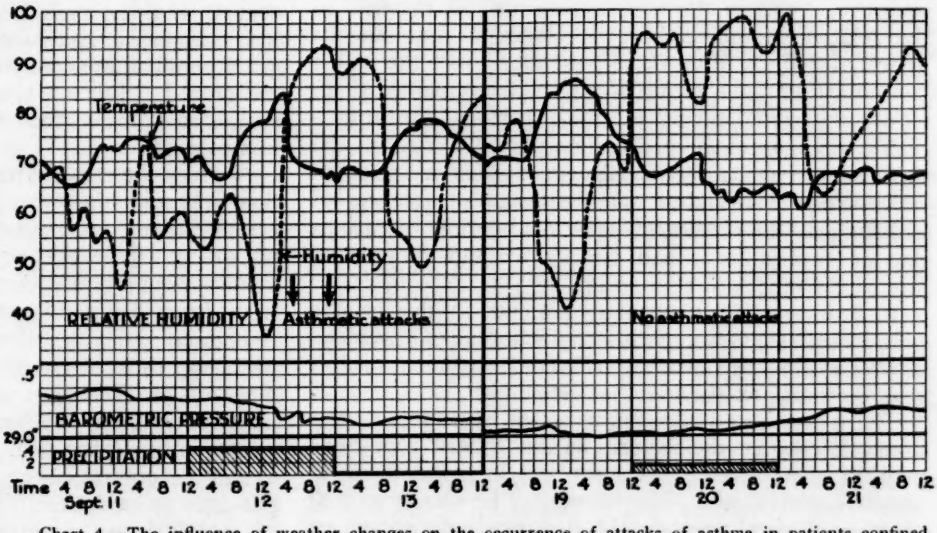

Chart 4.—The influence of weather changes on the occurrence of attacks of asthma in patients confined to filtered air.

An unusual opportunity for the study of the effect of weather changes on patients suffering from pollen asthma was offered on the 12th and 20th of September. September 12, seven patients were in the two wards. Six of these had been under observation since September 3, and one had entered the day before. Four of the seven had been permitted to go out for from nine to twelve hours that day, while the other three had remained in the ward during the preceding thirty-six hours. All had relatively little or no asthma. At 5 p. m., September 12, when the first rain of that day

started, all seven began to have asthma. The attacks became milder by 9 p. m., but recurred at 11 p. m. with the second heavy downpour. The attacks lasted all night and persisted in spite of the use of epinephrine for from one to three days.

Five of the same group remained under observation until September 22. Another rain occurred, September 20. It failed to produce the same effect as had occurred on September 12. It is noteworthy that on September 12 the weather conditions were very unstable. There occurred a sudden drop in temperature, a very marked rise in humidity, and a sharp drop in barometric pressure, followed by a rise and another fall. September 20, the rise in humidity was also great but not as rapid or as marked. There was a fall in temperature and a very gradual rise in barometric pressure. These changes are shown in chart 4.

These observations indicate that other factors besides pollen concentration influence attacks of asthma during the season. This is especially emphasized by the history of the three patients who had been confined to the ward for the preceding thirty-six hours with no symptoms. With the occurrence of a sudden drop of barometric pressure, a fall in the temperature and an increase in the relative humidity there developed a simultaneous attack of asthma in all these patients. Since the pollen concentration and the rate of air change remained practically the same during all these periods, the atmospheric changes in all probability played a rôle in the onset of these symptoms. Suggestion as a factor in influencing this almost simultaneous occurrence of asthma may be ruled out, since on previous occasions one or two patients had attacks without influencing any of the others of this group.

It is interesting that many patients in the private practices of allergists of this city who had no previous attacks during this season suffered from more or less severe attacks on the night of September 12.

There are two possible explanations of these observations: First, that the changes in atmospheric conditions may in themselves precipitate attacks of asthma in sensitive individuals. The effect may be similar to that of other physical agents and is apparently dependent on violent atmospheric disturbances. Second, that the degree of sensitivity is altered by atmospheric changes, so that pollen sensitive individuals react to very much lower concentrations of pollen.

CONCLUSIONS

1. Experimental and commercial filters as now manufactured are not 100 per cent efficient for removal of pollen.

2. Air filtration that removes all but traces of pollen will relieve symptoms of hay fever.

3. Symptoms reappear on exposure to pollen laden air regardless of length of confinement to filtered air. The time for reappearance of symptoms is inversely proportional to the pollen concentration outdoors.

4. Filtered air, cooled from 8 to 10 degrees F. below outside temperatures without dehumidification, does not give as prompt or as great relief from symptoms of hay fever as uncooled filtered air.

5. If patients with pollen asthma are confined in filtered air for a sufficient length of time, their subjective symptoms of asthma will be relieved. The objective evidences of asthma disappear less readily.

6. The length of the primary confinement period in filtered air is determined by the severity of the asthma.

7. Patients with asthma require a longer period of initial confinement in filtered air than those with hay fever.

8. The tolerance period on exposure to pollen varies even in the same individual from day to day because of the variation in the pollen concentration outdoors.

9. Confinement in filtered air before the onset of asthma will not prevent its occurrence.

10. Cooling of filtered air may aggravate asthma because of an increase in relative humidity.

11. In addition to pollen concentration, weather changes are important influences in precipitating attacks of asthma in pollen sensitive patients.

1853 West Polk Street.

MINIMIZING EARLY POSTOPERATIVE PNEUMONIA

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The literature of recent years is replete with articles dealing with the early pneumonic complications following anesthesia and operation. The frequency and gravity of these conditions have everywhere been recognized. But as their etiology was obscure, the suggested means for prophylaxis were many, but unavailing.

A great impetus, however, was given to research in this field with the postulation of the theory that these complications are caused primarily by an altered physiology, depressed respiration. This decreased pulmonary ventilation prevents the tracheobronchial secretions from being removed by nature's processes, and, remaining in situ, these secretions block the air passages, thus often imprisoning pathogenic bacteria. The air in the areas of the lungs supplied by the bronchioles or in the bronchi closed by these plugs of mucus is soon absorbed. Thus atelectasis is caused, its extent depending on the size and number of the air passages so occluded. The imprisoned bacteria, being undisturbed in an unaerated field, multiply rapidly. The ensuing pathologic development, if any, is usually pneumonia, as the pneumococcus is the predominant pathogenic organism present in this field.

What may be considered a step in the development of this theory was the observation of Scott [1] on the postoperative massive collapse of the lung; and again when he and Cutler [2] reported on that subject and the effect of hyperventilation with carbon dioxide after anesthesia and operation, in accordance with the method of Henderson, Haggard and Coburn [3] as a prophylaxis.

Coryllos and Birnbaum [4] then postulated that lobar pneumonia was a pneumococcic lobar atelectasis. Henderson and Haggard [5] recommended hyperventilation of the lungs (with carbon dioxide) as a prophylactic measure for pneumonia.

From the Anesthesia Department of the Woman's Hospital.

1. Scott, W. J. M.: Postoperative Massive Collapse of the Lung, Arch. Surg. **10**: 73 (pt. 1, Jan.) 1925.

2. Scott, W. J. M., and Cutler, E. C.: Postoperative Massive Atelectasis: II. The Effect of Hyperventilation with Carbon Dioxide, J. A. M. A. **90**: 1759 (June 2) 1928.

3. Henderson, Yandell; Haggard, H. W., and Coburn, R. C.: The Therapeutic Use of Carbon Dioxide After Anesthesia and Operation, J. A. M. A. **74**: 783 (March 20) 1920.

4. Coryllos, P. N., and Birnbaum, G. L.: Lobar Pneumonia Considered as a Pneumococcic Lobar Atelectasis of the Lung: Bronchoscopic Investigation, Arch. Surg. **18**: 190 (Jan.) 1929; Bull. New York Acad. Med. **4**: 384 (March) 1928.

5. Henderson, Yandell, and Haggard, H. W.: Hyperventilation of the Lungs as a Prophylactic Measure for Pneumonia, J. A. M. A. **92**: 434 (Feb. 9) 1929.

As this theory of the primary cause of early postoperative pneumonic complications is physiologic—depressed respiration—and the prophylaxis is the inhalation of carbon dioxide, it has attracted the attention of surgical clinics everywhere, for the anesthetics in general use depress respiration when given to the full effect. In addition, many operations per se also cause hypoventilation of the lungs both during and immediately following operation, laparotomies being the most important class in producing this respiratory restriction. The early postoperative narcotic medication often prolongs this hypoventilation.

The considerable incidence of pneumonia and atelectasis occurring so early after operation alone indicates that there may be something directly connected with the anesthesia, operation or immediate postoperative period that favors the development of these serious complications. Pulmonary hypoventilation is a conspicuous condition of this special time.

The usual pneumonia that follows operation generally develops on the second or third postoperative day. There are a sudden, but not a great, rise in temperature, an accelerated pulse and respiration, cough with more or less pain, purulent expectoration and leukocytosis. The percussion note is dulled. The x-ray picture shows a light V shaped shadow. The lower lobes are the most frequently affected. Bronchial breathing may not appear until after another twenty-four hours. The condition is generally classified as bronchopneumonia or pneumonitis.

Closely associated with this type of postoperative pulmonary complication is massive atelectasis or collapse of a lung or of a lobe. This occurs early after operation and often eventuates in pneumonia. So intimately are these conditions associated that the differential diagnosis in the developing period of pneumonia (if such a development occurs) is frequently obscured. Coryllos [6] asserted that there is "the greatest difficulty and often the impossibility of a differential diagnosis between pneumonia and lobar atelectasis, clinically as well as roentgenographically." King [7] also emphasized the difficulty of differential diagnosis, and in his report of these complications he stated that he does not separate the early postoperative pneumonia from collapse of the lung.

If the area or areas of atelectasis are small and the bronchioles supplying these areas are "unplugged" before infection develops, they are unnoticed.

Another typical but rather infrequent pneumonia of this early postoperative period is the aspiration type. It usually occurs on the first or second day after operation.

It is emphasized that sepsis increases the incidence of pneumonic complications throughout the entire postoperative period.

These early postoperative pulmonary complications vary greatly in their severity. Some produce only slight manifestations, while others are very toxic. In a study covering two years at the Presbyterian Hospital, New York, Whipple [8] reported twenty-five deaths in ninety-seven cases of postoperative pneumonitis, or a mortality rate of 25.8 per cent. This classification covers the majority of the total pulmonary complications of the types here discussed, which occur in the early postoperative period.

6. Coryllos, P. N.: Postoperative Apneumatosis (Atelectasis) and Postoperative Pneumonia, J. A. M. A. **93**: 98 (July 14) 1929.
7. King, D. S.: Postoperative Pulmonary Complications, J. A. M. A. **100**: 21 (Jan. 7) 1933.
8. Whipple, A. O.: A Study of Postoperative Pneumonitis, Surg., Gynec. & Obst. **26**: 29 (Jan.) 1918.

As to incidence, the very number clamors for prophylaxis. King,[7] in a study at the Massachusetts General Hospital, Boston, reported an incidence of 14 cases of early postoperative pulmonary complications after 148 gynecologic laparotomies, the patients being untreated with carbon dioxide, or an incidence of 9.6 per cent. The mortality rate was not stated.

At the Woman's Hospital, a total of 654 gynecologic laparotomies were performed during 1932, this being the only class of operation of any number at this hospital which King covered in his investigation. In the group of 654 consecutive gynecologic laparotomies at the Woman's Hospital, there were only two early pulmonary complications of the type discussed, or an incidence of 0.31 per cent, with no mortality.

Of the 654 laparotomies, 207 were of the "double" type of gynecologic operation, involving an operating time of from an hour and a half to two hours or more. Two complications occurred in this class of operation; one, light bronchopneumonia, and the other, collapse of the lung. The following unusual history of the last mentioned complication is from the record of the case:

> Preoperative diagnosis, tracheobronchitis chronic.
>
> During the past four years, patient has had four attacks in which a diagnosis of spontaneous pneumothorax has been made. During each attack patient would have sudden severe pain in right chest, followed by marked dyspnea, and on one occasion she lost consciousness for a period of an hour and a half.
>
> Repeated roentgen examinations have shown no pathologic changes except the collapsed lung, which returns to the normal condition after several weeks. Repeated sputum examinations have also been negative.
>
> Patient has a son, aged 14, who has also had a similar attack during his earlier childhood.

Only one other case of pneumonia occurred in this series during the entire stay in the hospital, and that developed on the eighteenth day after operation as a complication of a preexisting infection.

Carbon dioxide was administered to many of the patients, and it is thought that this form of prophylaxis is reflected in the record of low incidence of early postoperative pulmonary complications just quoted. Other means, also, were designedly used for the same end, and this prophylaxis is likewise reflected. This composite prophylaxis will be detailed, not that it involves anything in its component parts that is not known, but rather because it combines into a balanced practical whole various available means and methods that have been proved of value in meeting the problem of early postoperative pneumonia, in the light of the newer concept of its etiology. The effectiveness of this prophylaxis may be judged better by comparative results than by a theoretical consideration. The records of the hospital have been diligently searched, so there is little probability of any error of omission affecting the rate of incidence reported.

Since this report was originally submitted, the records for 1930 and 1931 have been studied. The totals for the years 1930 to 1932 inclusive are: gynecologic laparotomies, 1,837; early pulmonary complications, 6, or an incidence for the three-year period approximately the same as for the year 1932, given in more detail. These complications include all types of pneumonia or pneumonitis and collapse of lung that occurred within the first four days after operation. It is considered that this covers the time in which these complications that may be associated with the respiratory depression of

anesthesia, operation and immediate postoperative period have their inception.[7]

With interest centered on respiratory depression (a term here used synonymously with subventilation and hypoventilation), the important question that arises is What causes the pulmonary hypoventilation, or that part of it which may be amenable to prophylaxis?

On the basis of treatment, these causes may be divided into three general classes: (1) narcotics and nonvolatile anesthetics, (2) volatile anesthetics and (3) shock and hemorrhage. These three classes will be considered in reverse order.

SHOCK AND HEMORRHAGE

In both shock and hemorrhage, pulmonary hypoventilation is a conspicuous symptom. In 1924, in reporting observations in this hospital on blood pressure in operative surgery, I [9] stated:

> Blood transfusion stands at the head of the list of the means used for both the prophylactic and the restorative treatment of surgical shock and hemorrhage. However, in many cases, when serious depression occurs during or soon after the operation, blood transfusion usually is not available soon enough, for time is an all-important factor in the restorative treatment. To tide over till the patient can be typed and a donor arranged, 250 cc. of a 6 per cent solution of gum acacia and 20 per cent glucose is introduced intravenously at the rate of 4 cc. a minute.

Today, an even more extensive use is made of both of these means at the Woman's Hospital for the purpose mentioned, only the acacia-dextrose solution is used more frequently as a prophylactic than the reference states.

In both shock and hemorrhage, blood transfusion (or acacia-dextrose solution given intravenously), if used promptly, helps to restore normal pulmonary ventilation, and it exerts an influence in this respect over a considerable period of time. It also helps to preserve the patient's resistance against infection by better maintenance of vital functions, an important matter not only in connection with the early pulmonary infections under consideration, but also in the general welfare and safety of the patient.

VOLATILE ANESTHETICS

Each of the volatile anesthetics produces pulmonary hypoventilation as the depth of anesthesia is increased. The important problem is to administer the minimum amount necessary to produce the required degree of anesthesia, and no more. From another point of view, it is to depress the respiration as little as possible. The depth of anesthesia by volatile anesthetics may be quickly lessened by spontaneous or stimulated pulmonary ventilation. At the end of the operation, the patient may be quickly deanesthetized by the administration of carbon dioxide, as shown in the original report in 1920.[8] With the symptomatic administration of carbon dioxide, there is thus secured a pliable control of the respiration under volatile anesthetics, and a quick elimination of them when they are no longer required. Hasty elimination of the anesthetics and complete expansion of the lungs are indicated at the end of the operation when there is considerable respiratory depression, or the patient is not properly oxygenating; when the depth of anesthesia was pronounced at any time; when the patient's respiratory tract reacted unfavorably to the anesthetic, or when there has recently been a respiratory infection or the history of one following a previous operation.

Of course, elective operations ought not to be performed soon after any acute respiratory infection, regardless of the type of anesthesia employed.

NARCOTICS AND NONVOLATILE ANESTHETICS

These substances are likewise respiratory depressants, depending on the amount administered and the usually unknown susceptibility of the individual patient. Their elimination cannot be hastened with the administration of carbon dioxide, or by any other practical means known. The respiratory depression they cause may last for hours. When used as a preliminary to the volatile anesthetics, they should be given only in small dosage. In the postoperative use of narcotics, the first administration should be withheld until the patient reacts from the anesthetic, and then only in the smallest dosage that will suffice. Within the first few hours following operation, the patient's lungs should be given as much opportunity as possible to expand spontaneously and without being unduly handicapped by narcotic respiratory depressants. Besides, it is important to keep the tracheobronchial secretions liquefied at this time, so that the medication should be directed accordingly.

CARBON DIOXIDE

During and at the end of the operation, carbon dioxide is administered as indicated by the patient's respiration, oxygenation and other special indications previously mentioned. Because most of the carbon dioxide is administered in the operating room, it is diluted with oxygen, generally 20 per cent carbon dioxide and 80 per cent oxygen. It is thus made convenient and pliable for different methods of anesthesia and apparatus. This is no particular improvement, however, over the original method for deetherizing at the end of the operation.[8] But for use during the operation, it is considered preferable to have the carbon dioxide diluted with oxygen rather than with air. Besides, with some of the anesthetic apparatus air is excluded.

CONCLUSIONS

1. There is evidence that the pulmonary hypoventilation of anesthesia and operation is an important etiologic factor in early postoperative pneumonia.

2. There is evidence that the combining of means to prevent and promptly to alleviate this pulmonary hypoventilation with the symptomatic administration of carbon dioxide lowers the incidence of early postoperative pneumonia.

3. There is evidence that the prolonged respiratory depression caused by narcotics, nonvolatile anesthetics, shock and hemorrhage increases the incidence of early postoperative pneumonia and lessens the effectiveness of carbon dioxide as a prophylactic.

150 Riverside Drive.

9. Coburn, R. C.: Blood Pressure in Operative Surgery and Anesthesia, J. A. M. A. **82**: 1748 (May 31) 1924.

The Upper Urinary Tract in Pregnancy.—Hofbauer found a definite hyperplasia of the wall and sheath of the ureter at its lower end and believes that this constitutes an obstruction to outflow at the bladder, causing the dilatation of the ureter throughout its whole length. . . . Gremme comparing the views of the various workers comes to the conclusion that there is atony of the upper urinary tract in pregnancy which makes it possible for the ureter, especially the right, to be compressed between the uterus and the psoas muscle, that dilatation of the urinary tract does not necessarily mean the presence of stasis, and that there may be delay in emptying the upper urinary tract without the kidney function being affected.—Baird, Dugald: The Upper Urinary Tract in Pregnancy, *Lancet* **2**:983 (Nov. 5) 1932.

DISORDERS OF MOTILITY OF THE IRIS

REPORT OF CASE

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A knowledge of the disorders of motility of the iris is frequently of considerable help in pointing to, if not determining, many abnormal conditions of the body as functional and organic disturbances, especially toxic and central nervous system diseases. The knowledge should be used by all, but it is of greater help to those who have not ready access to many of the more intricate or special methods of diagnosis, particularly laboratory or technical procedures.

To understand the disorders of motility of the iris it is desirable to consider its structure and its normal function. Within the anterior segment of the eye the iris forms a diaphragm which contracts or dilates to permit the entrance into the eye of the amount of light most favorable to satisfactory vision. To accomplish this there are two sets of muscle fibers, each having a different source and type of nerve supply. The contracting fibers, or the sphincter muscles, are under the control of the third cranial nerve, which contains, as well as its central connections, fibers of the autonomic nervous system. The third nerve also contains sensory fibers from the internal rectus muscles [1] and connections from the afferent arm of the light reflex arc. The distant relation of these two afferent pathways explains how, in the Argyll Robertson phenomenon, pupillary reaction to convergence is retained. Wilkinson [2] called attention to this in his assumption that the sensory fibers from the ocular muscles constitute the afferent arm of the reflex arc governing pupillary reaction to convergence. The afferent arm of the light reflex arc begins in the rods and cones of the retina and passes with the optic nerve fibers to the external geniculate body, where they leave the optic tract and pass to the superior colliculus, from which the pathway continues to the third nerve nucleus after semidecussating.

It is between the superior colliculus and the third nerve nucleus that the light reflex fibers are damaged, giving rise to the Argyll Robertson pupil. The spinal miosis, which frequently accompanies the loss of the light reflex, is due to a paralysis of the cervical sympathetic from degenerative cord changes. Sven Ingvar [3] attributes the miosis to irritation of the third nerve due to early meningitic changes in the process of the disease. He also holds that the same type but a more advanced stage of the meningitis is responsible for the loss of the light reflex and that the pathway anterior to the colliculi may be responsibly affected. In both instances he dispenses with the assumption of a single focus which has never been found. It is reasonable to expect though that, if the miosis were produced by irritation from early meningitic changes, there would later occur a paralytic type of mydriasis. This is seldom seen.

The radiating fibers that dilate the pupil are governed by the sympathetic nerve supply with its center in the ciliospinal ganglion in the upper thoracic part of the spinal cord. There are afferent fibers in the cord that connect the center with the brain, and some have held that the center is in the brain stem. Ingram, Ranson and Hannett [4] found that dilatation of the pupil could be obtained by stimulating various points in the midbrain and pons, and that it was not confined to a center in the hypothalamic region as found by Karplus and Kreidl.[5] The wide distribution of points producing pupillary dilatation experimentally is probably accounted for by the varied and numerous impulses, as psychic, visual, auditory and tactile, to the dilator fibers of the iris through the cervical sympathetic, and that these afferent pathways converge to and through the brain stem on their way to the ciliospinal ganglion. These are analogous to the afferent pathways from the muscles of convergence, on the one hand, and the retinal elements of the light reflex arc through the third nerve nucleus to the sphincter iridis,

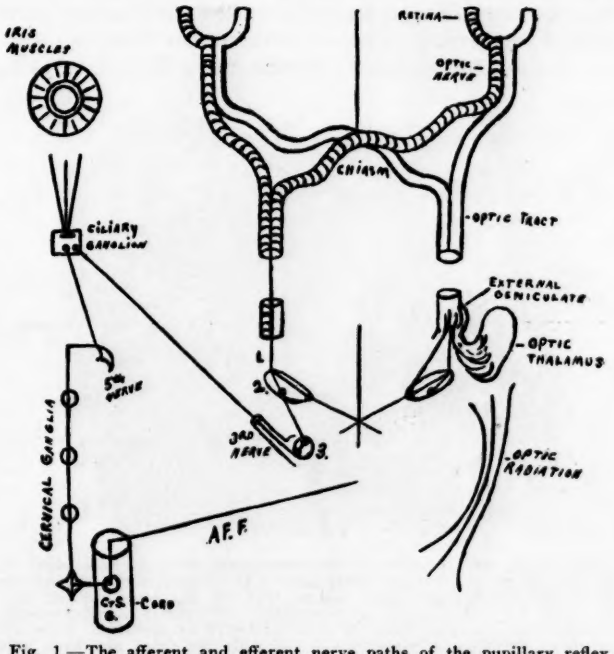

Fig. 1.—The afferent and efferent nerve paths of the pupillary reflex to light and the efferent arm of the sympathetic to the dilator pupillae. At 1 the light reflex fibers have left the optic tract at the external geniculate body and pass to 2, the superior colliculus, from which they semidecussate to 3, the third nerve nucleus. From the third nerve nucleus they pass out as efferent fibers through the ciliary ganglion to the circular (sphincter) muscle of the iris.

AF F, afferent fibers from the brain to *C-S G*, the celiospinal ganglion in the thoracic part of the spinal cord, from which fibers pass up the neck through the cervical ganglions into the cranial cavity and with a branch of the fifth nerve continue through the ciliary ganglion in the orbit to the dilator muscle of the iris.

on the other. From the ciliospinal center, fibers pass up through the cervical ganglions into the cranial cavity, and with one of the branches of the fifth nerve they continue to the iris through the ciliary ganglion in the orbit. The nerve supply to the tarsal muscles is also from the cervical sympathetic.

There are other factors, of course, which may affect the size of the pupil and its motility such as changes in the vascular tone, iris adhesions and the state of refraction.

The reaction of the pupil takes place unconsciously and involuntarily. The impulse is excited chiefly from

From the McGuire Clinic, St. Luke's Hospital.

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2. Wilkinson, H. J.: The Argyll Robertson Pupil: A Contribution Toward Its Explanation, M. J. Australia **1**: 267-272 (Feb. 19) 1927.

3. Ingvar, Sven: On Pathogenesis of Argyll Robertson Phenomenon, Bull. Johns Hopkins Hosp. **43**: 363-396 (Dec.) 1928.

4. Ingram, W. R.; Ranson, S. W., and Hannett, F. I.: Pupillary Dilatation Produced by Direct Stimulation of Tegmentum of Brain Stem, Am. J. Physiol. **98**: 687-691 (Nov.) 1931.

5. Karplus, J. P., and Kreidl, A.: Arch. f. d. ges. Physiol. **129**: 138, 1909; **135**: 401, 1909; **143**: 143, 1909.

two sources: first, by light and second, by sensory stimuli, each of which has a cortical representation. The light impulse carried indirectly from the optic back over the third nerve produces contraction of the pupil, and as the light diminishes dilatation takes place. The reaction is very sensitive, taking place in the two eyes equally, even though only one eye receives the light. Its cortical representation is manifested by contraction of the pupil with the thought of a bright light. On the other hand, sensory stimuli throughout the body produce dilatation by partly stimulating the ciliospinal center and by partly inhibiting the oculomotor center. The cortical representation is psychic, as manifested by dilatation from fear and other emotions. Removal of the normal sensory impulses, as in sleep or hypnosis, produces a contracted pupil. To go beyond this, abolition of the third nerve impulses takes place with dilated pupil.

The associated pupillary reaction is the contraction that takes place in association with convergence and in accommodation. In infants, the pupils are contracted; according to my observation, in from eighteen months to two years, they become more dilated. Again,

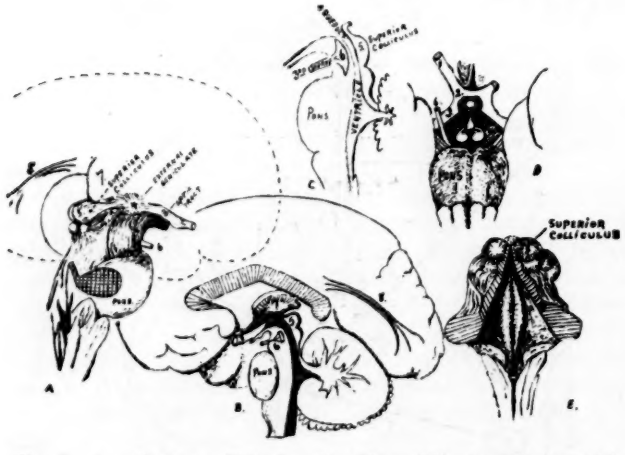

Fig. 2.—1, optic nerve (*D*); 2, optic chiasm (*D*); 3, optic tract (*A*, *B* and *D*); 4, external geniculate body (*A*); 5, superior colliculus (*A*, *B*, *C* and *E*); 6, third nerve and nucleus (*A*, *B*, *C* and *D*); 7, optic thalamus (*A* and *B*); 8, optic radiation (*A* and *B*). These semidiagrammatic drawings have the optic pathways exaggerated. They are presented for a quick visualization, especially for those who have little occasion to consider them.

in later life they become more contracted. These changes are probably accounted for by the development and later stabilization of the sensory nervous system. In old age the contraction increases and the reaction becomes sluggish from tissue rigidity.

The pupil and the ciliary body react to poisons. Belladonna and cocaine dilate them, the former by paralysis of the autonomic terminals of the third nerve, cocaine and epinephrine by stimulating the cervical sympathetic terminals. Miotics contract the pupil by stimulating the autonomic terminals of the third nerve.

THE DISORDERS OF MOTILITY OF THE IRIS

The disorders of motility of the iris manifest themselves by diminished reactions or alterations in the size of the pupil. The chief manifestations are an abnormally large pupil or mydriasis, an abnormally small pupil or miosis, and a loss of the light reflex, or Argyll Robertson pupil. Other manifestations are unequal pupils or anisocoria and loss of the convergence reflex.

Mydriasis and miosis appear as a paralytic or as a spastic type of disorder.

Anisocoria, or unequal pupils, is seen in pathologic conditions affecting the eyes unequally or unilaterally, or it is a condition seen in those who are perfectly healthy or at most have a functional neurosis. According to Duane,[6] in some cases it indicates tuberculosis.

Paralysis of the convergence reflex is the inverse of the Argyll Robertson pupil and is seen in cases of convergence paralysis occurring in functional and in organic central nervous diseases, such as tabes and multiple sclerosis.

Frequently observed with these disorders is an irregularity of outline of the pupil usually due to inflammatory changes of the iris; when not due to this, according to Taylor,[7] "it is to be attributed in most cases to lesions of the nerves innervating the iris and to a consequent imperfect action of the muscles."

Hippus, which is an alternate contraction and dilatation of the pupil, is largely put in the class of an exaggerated normal state, as the iris normally varies constantly in size. When marked, it is usually pathologic and is seen in such states as hysteria, chorea, mania and meningeal irritation.

SPASTIC MYDRIASIS

Mydriasis, or dilatation of the pupil, occurs as a spastic mydriasis from irritative lesions in the neck and spinal cord and from cerebral irritation of the most widely differing kinds. Spastic dilatation occurs during states of shock from various sensory stimuli; as in peripheral irritation, gastro-intestinal disturbances, during teething, and from various psychic stimuli which excite the emotions, such as extreme fear. In all instances the dilator fibers are stimulated through the cervical sympathetic. It may be a prodrome of a paralysis of the cervical sympathetic and thus is associated with all its causes.

The normally wide pupil seen in refractive errors and in asthenic and nervous conditions reacts promptly to light; also in spastic mydriasis the pupil usually still reacts, a distinction from paralytic mydriasis. In the blind eye the pupil ceases to react from removal of its normal stimulus.

PARALYTIC MYDRIASIS

Paralytic mydriasis, the more important of the two, is a dilatation of the pupil occurring from lesions that paralyze the third nerve or its central connections and, when so isolated, affect the sphincter fibers to the iris. Often there is an associated involvement of the fibers to the ciliary body, so that a dilated immobile pupil is found usually connected with loss of accommodation, constituting an ophthalmoplegia interna (or total iridoplegia).

Syphilis, particularly cerebral syphilis, affecting the third nerve nucleus, is the chief cause. Other causes are diseases of the central nervous system, especially the parasyphilitic diseases, tabes and dementia paralytica, intracranial lesions such as meningitis after the early stage, extradural and subdural hemorrhage, often producing an early homolateral fixed dilatation, trauma of the base of the skull with injury to the third nerve, toxins of diphtheria and of putrefied meat affecting the third nerve nucleus, local lesions and drug poisons such as belladonna affecting its terminals, coma, severe physical shock such as exsanguination, and impending death from any cause.

6. Duane, A., in Fuchs.[10]
7. Taylor, E. W., in Osler, William: Modern Medicine, Philadelphia, Lea & Febiger **7**: 542, 1910.

SPASTIC MIOSIS

Spastic miosis is produced by lesions which irritate the third nerve or its central connections. Such intracranial lesions are early cerebral meningitis, thermic fever, and hemorrhage in the region of the pons or ventricles; also, occasionally, by producing meningismus or meningeal irritation, plethoric states of the brain such as acute high fevers, uremia and alcoholism. It occurs in certain rare cases of cyclic oculomotor paralysis, and locally it occurs with ocular inflammations and in conjunction with spasm of accommodation. In Sollmann's Manual of Pharmacology [8] it is stated that the inhibition of the normal sensory impulses flowing to the oculomotor nucleus brought about by narcosis is produced by morphine in a specific manner.

PARALYTIC MIOSIS

Paralytic miosis occurs from paralysis of the cervical sympathetic nerve. Paralysis of the cervical sympathetic presenting the manifestations of a Horner syndrome will be discussed later with the case report. The spinal miosis that frequently accompanies loss of the light reflex is produced usually by a degenerative lesion of the cord. The loss of the light reflex termed iridoplegia and commonly known as an Argyll Robertson pupil is caused by the same malady affecting the brain stem. This manifestation is seldom seen except in cases of tabes dorsalis or dementia paralytica. In these diseases loss of the light reflex becomes the outstanding ocular symptom, occurring in over 60 per cent of the tabetic cases, and of this 60 per cent from 25 to 30 per cent present a spinal miosis. Sachs [9] says that it is the earliest objective and by far the most constant symptom of tabes.

The presence of the fully developed Argyll Robertson pupil all but affords positive proof of syphilis of the central nervous system. Very rarely it is seen in nonsyphilitic conditions such as tumor of the third ventricle, certain traumatisms, poisoning from lead, tobacco and alcohol, epidemic encephalitis and multiple sclerosis. Irregularities in its outline may precede or accompany the Argyll Robertson pupil, and the loss of the light reflex may be seen with a normally wide pupil, but total iridoplegia with a dilated pupil is rather an evidence of cerebral syphilis.

In supranuclear or cortical lesions affecting vision, such as the temporary blindness seen in uremia, puerperal amaurosis, and the amaurosis of postbasic meningitis occurring in cerebrospinal meningitis, and acute cerebral amaurosis of infancy, the light reflex arc remains intact. Here with loss of vision the pupil reacts promptly to light.

REPORT OF CASE

History.—Mrs. A. H., aged 27, came to the clinic complaining of ptosis of the right eyelid of six months' duration and a more recently developed periodic headache.

Her past history was negative except that she had been subject to infrequent attacks of migraine and had had a simple colloid goiter. The gland produced little prominence, but she suffered from attacks of choking sensations for which she was advised to have a thyroidectomy.

Thyroidectomy was done, April 1, 1932, at one of the Richmond hospitals, and, before she left, a partial ptosis of the right eyelid had developed. The patient was told that this was an unexplained third nerve involvement, that it was not connected with the operation, and that it would clear up in the course of time. In the course of a few months the lid condition became worse. Later the sick headaches increased in frequency and severity, occurring every other week-end and located in the region of the occiput. An occasional shooting pain passed through the eye. The patient remarked on the possibility of losing the sight of the eye.

Description of Examination.—The vision in both eyes was 20/20, or normal. There was a small amount of compound hyperopic astigmatism in both eyes. Except for the refractive error the left eye was entirely normal.

The right lid drooped to about one third of the distance over the pupil, and the tissue at the upper part of the lid appeared relaxed and full. From further attempt to elevate the lid by the frontalis muscle the right brow was raised and the frontalis muscle was in varying degrees of spasm, causing a fulness over the brow and, during periods of relaxation, an increase in the lid droop.

The right lid acted quickly and fully. It was elevated as high as the left lid when the eyes were rotated up. The right pupil was from 2 to 2.5 mm. in a moderate light as compared to the left, which was 4 to 4.5 mm. The iris was active directly and consensually. The pupils dilated equally under homatropine. There was slight but distinct dilatation under cocaine; epinephrine was not instilled. There was no extra-ocular muscle imbalance. The media and fundus were normal.

Fig. 3.—Appearance of patient with paralysis of the right cervical sympathetic. The points of interest are the small pupil, the drooping lid and the spasm of the frontalis muscle, which is not a part of the syndrome but a result of the partial ptosis.

There was no discernible difference in the vascularity of the two sides, and no difference in the temperature could be elicited.

Analysis of the Examination.—The partial ptosis and the contracted pupil seen here are the important symptoms constituting a Horner syndrome, which is found in paralysis of the cervical sympathetic. In a third nerve paralysis with ptosis, if the pupil is altered it is dilated. Other symptoms occurring in a Horner syndrome are a difference in the fulness of the vessels on the two sides of the face, the affected side being redder and warmer and showing more moisture, in recent cases, than the unaffected side. Later the opposite condition prevails. The eyeball appears to retract into the orbit. The partial ptosis is due to a paralysis of the superior tarsal muscle.

The increased headache was attributed to two factors, the fatigue brought on by spasm of the frontalis muscle, and the uncertainty of the nature and outcome of the trouble. The synergistic action in this case was under control of the will, and in this respect unlike the synergistic or the antagonistic action of the extra-ocular muscles in old paralytic cases or in cases of concomitant strabismus in which the muscle spasm is due to an unconscious impulse to suppress vision. In these cases headache is not present, unless the case is considered before the strabismus develops; then headache may be present from the muscular strain of retaining binocular fixation.

8. Sollmann, Torald: Manual of Pharmacology, Philadelphia, W. B. Saunders, 1917, p. 223.
9. Sachs, Bernard, in Osler: Modern Medicine, p. 682.

Etiology.—The causes, according to Fuchs,[10] are usually "the coarser lesions and most frequently pressure on the nerve from tumors in the neck such as goiter or enlarged lymph glands. More rarely it is caused by traumatisms as fracture of the clavicle, or operations in this region as extirpation of tumors and sympathectomy. Other causes are tuberculosis at the apex of the lung, neuritis of the cervical plexus, tumors and injury of the spinal cord and spinal cord lesions as tabes and syringomyelia. In most cases the cause is impossible to find."

Treatment.—According to Fuchs, "the paralysis, in addition to moderate disfigurement due to the ptosis, causes no annoyance, is not infrequently discovered accidentally, and is commonly incurable."

The treatment in this case was directed toward the relief of headache. The patient was told that tumors of the neck, such as an enlarged thyroid gland, at times brought about such a paralysis, but that in her case it was probably due to trauma of the operation, and that in all cases the chance for recovery was not good. She was assured that besides the cosmetic effect no harm would come from the paralysis, and she was advised to resign herself to this outlook and to relax the frontalis muscle. She was also advised to wear her glasses constantly to relieve ciliary strain.

These instructions were carried out, and six weeks later she returned to the clinic definitely improved. She said that she felt very much better and that she had had only two very mild attacks of headache. The ptosis was less, the fulness of the lid and brow had disappeared, and there was only an occasional mild spasm of the frontalis muscle. She seemed satisfied that there was no more injury than actually existed.

THE RÔLE OF FINANCIAL LOSSES IN THE PRECIPITATION OF MENTAL ILLNESS

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It is the widespread prevalent opinion that the economic strain and material loss of the present financial crisis has been provocative of a great increase in mental ill health. There have been many statements in the lay press and a few in the medical press regarding this relationship, but many of these statements, though of good authority, are opiniated generalities; a few, however, are the result of case studies, and it is in these that we are interested in this paper.

Statistics on the number of first admissions to state and government hospitals in the states of New York and Massachusetts are presented by Thom,[1] which show an increase only from 73.6 per hundred thousand of population in 1927 to 76.9 in 1931 in New York, and from 68 per hundred thousand of population in 1927 to 70.8 in 1931 in Massachusetts. It is his conclusion that "there is little to substantiate the contention that the depression has actually caused any appreciable increase in frank mental disease." A report from Canada[2] states that the population in hospitals for mental illness increased less in 1931 than in 1930. It is concluded that this indicates that the depression had not by 1931, at least, resulted in an increase of mental disorders requiring hospitalization. In a study from the Elgin (Ill.) State Hospital,[3] 150 cases of first admissions of patients with functional psychoses were carefully reviewed to determine the relationship of the mental breakdown to the economic stress. "Only 14 of 150 cases (9.3 per cent) studied had any manifest connection with the financial depression, and there was only one case in which the onset and development of the psychosis bore a definite relationship to the depression." One defect of this study lies in the fact that 113 of the 150 cases were diagnosed as dementia praecox, while only 19 cases were diagnosed as manic-depressive psychoses. It is not stated whether the cases were consecutive admissions, for they were chosen entirely at random, special selection being avoided.

METHOD OF STUDY

In the present study we have three purposes: (1) to determine the frequency of (*a*) real and (*b*) delusional (fancied) economic loss as a precipitating factor in the production of mental illness; (2) to determine the rôle of this financial loss in the patient's illness, i. e., to determine what special psychologic significance it might have, and (3) to determine the influence of the present economic depression on the mental health of the populace as judged by an intensive study of approximately 650 cases of mental sickness of various types.

Eliminating all organic cases, all incompletely studied cases and those of doubtful diagnosis, a series of 272 cases in which the patients were consecutively admitted to the Menninger Clinic from 1926 to 1929 was carefully reviewed. The cases of a similarly selected group of 374 patients admitted between 1929 and 1933 were also reviewed. These cases were all carefully studied, and the great majority had been presented at staff conferences and the mechanism of the mental illnesses investigated. Many of the patients were in residence in the sanatorium or the hospital for varying lengths of time. All those cases showing a relationship between economic loss or concern were again carefully reviewed to ascertain, if possible, the relationship between the economic situation and the symptoms manifest in the illness.

In classifying the relationship between the economic status of the patient and his illness, certain obvious groupings were conspicuous: (1) those with reactions to an actual loss, and (2) those with reactions to a threatened or a delusional loss.

Of the cases with an actual loss, there is a group in which the relatives of the patient placed much weight on the loss as a cause of the mental breakdown, but the patient regarded it as of minor importance. Such a case occurred in a woman, aged 56, whose condition was diagnosed as involution melancholia. There was a severe financial loss to the family through the failure of a business, and to this the family ascribed the onset of the patient's illness. Following this, however, she successively failed in election to a state office in a woman's club, then in election to a state political office, and also in the compilation of an historical document. She gradually became depressed and restless. While under observation she appeared distressed, moaned, cried, was unsteady of gait and demanded attention and sympathy. She complained of her eyes, teeth, gums, stomach, bladder, vagina and bowels, and continuously bemoaned her hopelessness and the loss of her mind, and how bad her family must feel. She complained

10. Fuchs, H. E.: Textbook of Ophthalmology, ed. 7, Philadelphia, J. B. Lippincott Company, 1923.

From the Menninger Clinic and Hospital.

1. Thom, D. A.: Mental Hygiene and the Depression, Ment. Hyg. **16**: 564-576 (Oct.) 1932.

2. Spaulding, H. B.: Mental Hospital Population, Ment. Health, Toronto **7**: 41-44 (Sept.-Oct.) 1932.

3. Collected and Contributed Papers of Elgin State Hospital, Chicago, Paramount Press, December, 1932, pp. 272-274.

continuously, but during the several months of observation and in many personal interviews she never mentioned money.

In the second group of cases with an actual loss, the relatives placed little emphasis on the loss, although the patient placed great emphasis on it. This situation is illustrated by the case of a successful, conservative, shrewd grocery merchant, aged 49, who, in attempting to expand his business, borrowed and invested several thousand dollars in a creamery. He associated himself with a partner whom he had known only a few weeks and to whom he gave entire authority to manage the creamery. A state-wide milk strike by farmers occurred shortly after the creamery project was launched, and the business threatened to fail, though without loss to the patient. Some years previously he had lost a large sum of money in a poor investment, but had been very little upset by it. In the present situation the patient became sleepless and extremely restless; repeatedly he would strike his head against the wall and continuously bemoan his loss. His family, however, had tried to show him how the whole situation could be remedied, but this effected no change in his attitude or behavior. During the period of hospitalization, the family did succeed in making good his losses, a fact which he accepted, but he continued in his extreme depression to wring his hands, bump his head and restlessly pace the halls. In this case it was apparent that the investment was carelessly executed, and that it probably was the result rather than a cause of his illness.

Then there are two groups in which no actual loss had occurred: patients with a delusional loss and those with an anticipated loss. In the first group, there existed the belief (delusion) that a loss had occurred. This is illustrated by the case of a farmer, aged 51, who had a manic-depressive psychosis, depressed phase. He had been successful, but had always worried over the possibility of financial loss; he had enforced a niggardly manner of living on his rather large family. For a period of several months before entering the hospital he had become more irritable and had absented himself from home a great deal. The town bank closed, tying up a small amount of money. His wife was a chronic invalid, and he complained of the burden of caring for her and began talking of suicide. While in the hospital he told of a shooting scrape thirty-five years previously during which he had killed a man. He told of keeping intimate company with a town widow for some years, having purchased two cars for her and supported her. He believed that his family was starving, that the farm would certainly have to be sold, and that his sins were the cause of his supposed economic failure.

In the second group without an actual loss, the patients were concerned with a threatened or an anticipated loss. A farmer, aged 50, was undecided as to the method of harvesting his wheat. It was apparent that he was wasting time, and when he was urged to begin the harvest he suddenly hired four combines to do the work, which was unnecessary. Wheat was selling at 25 cents a bushel, but from this time on the patient talked of being broke, of having spent so much money on life insurance and of having invested so much in land that he would be "wiped out." He insisted that he owed so much that he could never "get out," and that there was no use of even trying because he knew he was licked. He became suicidal and very depressed and tearful. He entirely recovered.

RESULTS

The table shows the frequency of the occurrence of a financial loss in the history of the patient and his reaction to it, and also the frequency of occurrence of a delusional or an anticipated loss in the mental picture.

In the total series of 646 cases, an actual financial loss which was regarded by the patient, by the relatives or by both as a causative factor in the illness occurred in 38 instances, or in 5.8 per cent of the cases. During the years of prosperity from 1926 to 1929, 17 of 272 cases (6.2 per cent) showed financial loss, compared to 21 of 374 cases (5.6 per cent) during the years of depression from 1929 to 1933. Thus there was a smaller percentage of cases associated with financial loss during the period of economic depression than during the years of economic prosperity.

Reaction to Financial Loss During Period of Prosperity and During Period of Depression

Psychoses, 1926-1929	Total Number of Cases	Occurrence of Actual Loss	Patient Unconcerned About Actual Loss	Exaggerated Response to Actual Loss	Delusional Loss	Delusions of Impending Loss
Manic-depressive psychoses....	66	8	1	7	3	1
Involution melancholia.....	13	2	0	2	2	0
Schizophrenia.....	46	1	0	1	0	0
Paranoid states.....	20	1	0	1	3	1
Exhaustion psychoses.....	3	0	0	0	0	1
Total.....	148	12 (8.1%)	1	11	8	3
Psychoneurosis, 1926-1929						
Simple depression.....	12	1	0	1	0	0
Neurasthenia.....	33	1	0	1	0	0
Obsessional neuroses.....	13	0	0	0	0	0
Anxiety neuroses.....	16	1	0	1	0	0
Anxiety hysteria.....	6	0	0	0	0	0
Conversion hysteria.....	22	2	0	2	0	0
Alcoholism.....	8	0	0	0	0	0
Drug addiction.....	6	0	0	0	0	0
Perverse personality (neurotic character).....	8	0	0	0	0	0
Total.....	124	5 (4.0%)	0	5	0	0
Psychoses, 1929-1933						
Senile psychoses.....	39	2	0	2	0	5
Involution melancholia.....	48	2	1	1	2	1
Manic-depressive psychoses....	76	12	2	10	2	5
Schizophrenia.....	68	1	1	0	0	0
Paranoid states.....	43	0	0	0	1	1
Total.....	274	17 (6.2%)	4	13	5	12
Psychoneuroses, 1929-1933						
Simple depression.....	19	2	0	2	1	1
Neurasthenia.....	19	0	0	0	0	0
Obsessional neuroses.....	12	0	0	0	0	0
Anxiety neuroses.....	16	1	0	1	0	0
Anxiety hysteria.....	10	0	0	0	0	0
Conversion hysteria.....	24	1	0	1	0	0
Total.....	100	4 (4%)	0	4	1	1

In comparing the psychotic groups of the two periods, we found that financial loss was a factor in 8.1 per cent of cases during the period of prosperity compared to 6.2 per cent of the cases during the years of depression. The frequency of losses in the psychoneurotic cases remained 4 per cent of the total in both periods.

COMMENT

In studying these results, it is debatable whether one should include cases in which the relatives laid emphasis on the financial loss as a cause and the patient appeared unconcerned. In the instance cited as illustrating this

group, in which the loss was rather distant and the patient made no reference to the loss, the money can scarcely be considered as a direct cause of the illness. The conflict within the individual is far greater than the external struggle. If such cases are disregarded, comparison of the psychotic groups shows that 7.9 per cent of the cases were precipitated by financial loss during the years of prosperity (1926-1929) compared to only 4.7 per cent of cases during the years of depression (1929-1933).

This study is based on a series of cases seen in private practice, and the patients hospitalized were in a private institution. Consequently, the question might be raised as to the comparison of the results shown by a similar study of patients in state hospitals. It should be pointed out that many cases included in this group studied in the clinic were entirely or almost entirely charity cases. Furthermore, a large percentage of patients placed an exaggerated emphasis on the loss, i. e., had ideas regarding the loss which were a part of the symptomatology rather than the etiologic precipitant. Only in five instances (less than 1 per cent) did the relatives stress the actual loss as of considerable importance when the patient seemed unconcerned about it. The study at the Elgin State Hospital referred to corroborates the results of this study, that in admissions to state hospitals the direct economic crisis was an infrequent causative factor in the patient's illness.

It is true that there has been a slight increase in admissions to state hospitals, but first admissions to schools for the mentally deficient have also increased noticeably. Certainly the depression has not caused an increase in hypophrenia, and it seems probable that a considerable part of the increase in admissions to state hospitals may be the result of families seeking custodial care for senile or for other chronic mentally ill relatives whom they are no longer able to support in their own homes or in private hospitals.

The specific rôle played by the financial loss in its relationship to the illness varies in each case. In general, one can state that it is primarily a precipitating factor rather than a cause. Thus, while it occurred more frequently in depression pictures, it precipitated the classic clinical types of many of the psychoses and psychoneuroses. There is, then, no typical mental picture precipitated by financial loss.

As has been pointed out, the majority of patients show an emotional response out of proportion to the facts, whether there is an actual loss or only a delusional or an anticipated loss.

It is particularly pertinent to consider why it might be that there is less mental illness precipitated by financial loss during a period of great economic depression than during a period of general prosperity. At least during the depressions (in which the majority of these cases fall), there is a clear-cut formula which explains this apparent paradox. Mr. X, an unusually successful business man, came to us some years ago for treatment during his second major mental depression; throughout his life he had deprived himself of pleasure and penalized himself heavily in various ways. Notwithstanding this, he accumulated considerable means. The economic depression developed, and he lost everything. During this period, however, he felt fine; he was confident that he could make money again. One can see clearly in this case that the patient was relieved of the necessity of the punishment of an attack of melancholia by the punishment inflicted by the economic depression and his consequent loss of money.

In most cases of mental depression, the patient expresses an exaggerated conscious guilt reaction, and in the cases precipitated by financial loss he often makes an association with this loss. Such patients feel "sinful," are extremely self-depreciatory, and blame themselves for the starving condition of their dependents and the ruined state of their homes. Frequently they inflict injury on themselves, self-mutilation, self-infliction of pain and even suicide. It is well recognized that this ideation and behavior are punishment for the sense of guilt on account of unconscious hate for the loved ones (as clearly worked out by Freud, in "Mourning and Melancholia," and by Karl Abraham). Further, it is clear that the rationalizations as to the cause of their conscious guilt (e. g., masturbation, poor judgment, "sinfulness") only mask a greater unconscious sense of guilt for other reasons. When an economic depression occurs, with its attending struggle and loss, it serves in many instances to propitiate this universal unconscious sense of guilt. Hence, during such a period, fewer persons are forced into a self-punitive depression reaction, and one would expect fewer cases of mental disorder from this causative factor.

SUMMARY

A total of 646 cases of "functional" mental illness (psychoses and psychoneuroses) were reviewed, and 38 instances (5.8 per cent) in which financial losses occurred as a causative factor in the illness were found. In 272 cases seen during the years of prosperity from 1926 to 1929, 6.2 per cent of the patients had an economic reversal as the precipitating agent in the illness. In 374 cases seen during the economic depression, 5.6 per cent of the patients gave a history of economic reversal as a factor in causing the illness. Of the psychoneurotic cases, 4 per cent of the patients had such a history during both periods, while of the psychotic cases, 8.5 per cent had such a history during the years of prosperity, compared to 6.2 per cent during the years of depression.

CONCLUSIONS

1. A smaller percentage of cases of mental illness showing a direct causal relationship to financial loss occurred during a period of national economic depression than during a period of national economic prosperity.

2. Financial losses, whether actual or fancied, represent a very small percentage of the total number of precipitating factors of mental disease, and thus play a minor rôle as causal factors.

3. Economic loss as displayed in the conscious reactions of the mentally sick patient in many instances carried a surcharge emotional value far exceeding the actual value. Often there is no actual loss, but a delusional loss or an anticipated loss which differs in no way in its psychologic significance to the patient from a real loss.

4. From intensive individual case study, it is suggested that the less frequent occurrence of mental illness associated with personal financial loss during the economic depression may be explained by the fact that the actual situation of economic stringency serves to satisfy the unconscious sense of guilt which under normal economic conditions has less opportunity for propitiation.

Clinical Notes, Suggestions and New Instruments

THE EFFECT OF EPHEDRINE IN THE TREATMENT OF MYASTHENIA GRAVIS: SECOND REPORT

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Three years ago I[1] published a short report of progress on the use of ephedrine in a case of myasthenia gravis. The correspondence that has developed with physicians and relatives of patients having myasthenia gravis seems to make a further report desirable.

In the past three years, except for short periods when the ephedrine has been discontinued or the dose increased, for experimental purposes, I have taken a daily dose of ⅝ grain (48 mg.) of ephedrine sulphate or of ephedrine hydrochloride with slow but continuous improvement. The rate of improvement has been apparently uniform; that is, the amount of improvement during the last six months seems to have been as great as during the first six months. Larger doses give me a temporary increase in strength, but these dosages are invariably followed in two or three weeks by such adverse symptoms that I have always been compelled to reduce the dose. When in recent reports on the subject I see doses larger than those here recommended, I wonder how carefully and how long the effects of such dosages have been followed. The humiliating effect of helplessness leads both the myasthenic patient and his physician to seek the maximal effect from any remedy. This leads them to err on the side of excessive doses of ephedrine. In my experience, the dosage that will give the greatest effect in the first few weeks will not produce continuous and sustained improvement over a long period. An added advantage of using a smaller dose than the maximum that will be tolerated is that in emergencies, such as exposure to cold or heat, the depressing effects of a menstrual period, respiratory infections, or unusual exertion—all of which affect the myasthenic symptoms adversely—the dose can be temporarily increased with resulting benefit. As concrete examples of this, an extra dose of ephedrine before an unavoidable exposure to cold, as on a railroad or a motor trip, will prevent a severe stiffness in all my muscles which would otherwise occur and which would have such a temporary paralyzing effect that I would have to be lifted out of the car, or into the train.

Periods of intense heat are very prostrating to patients with myasthenia gravis; in fact, it may be the cause of death. For three summers I have definitely protected myself against this depressing effect by increasing the daily dose during a period of very hot weather. The myasthenic patient shows a progressive fatigue or weakness toward evening. However, the increased exertion that is possible on an increased dose is shown when I take an extra dose before going out to dinner in the evening. I am able to rise from the table unaided at the end of the dinner, behave as a normal person during the evening, and leave without falling down the front steps on departing. Without this extra dose I know from many embarrassing occasions that I should not be able to do this. A chronic sinus infection with recurring attacks which resisted all attempts at treatment locally disappeared after I began taking ephedrine. These recurring sinus infections so accelerated my downward progress that in 1927 I resorted to an autogenous vaccine, following which the sinus infections became less severe and less frequent, and there was some improvement in the myasthenic symptoms. But one week's use of ephedrine produced greater improvement than ten months' use of the vaccine. Although I live and associate normally with other people who occasionally have colds, I have been free from them for over two years.

The long continued use of ephedrine may produce adverse effects, the control of which I have begun to consider. But its beneficial effects far outweigh any of these I have discovered. As a matter of wisdom, I shall discontinue its use as soon as I can do so without losing the gains it has produced, but recent attempts indicate that this is as yet far from possible.

The use of glycine in the treatment of myasthenia gravis is being studied with apparent success by Dr. W. M. Boothby at the Mayo Clinic.[2] Success also has been reported from its use by Dr. Remen[3] in Professor Kehrer's neurologic clinic at Münster, Germany. To what extent ephedrine will increase the improvement to be derived from glycine remains to be determined. From the communications I have received from patients with myasthenia gravis I am led to question the supposed rarity of the disease. The rarity would seem rather to be in the correct diagnosis of the trouble. Certainly in the early undiagnosed stage, when the only symptom is an excessive fatigability, which is very hard to appraise because there is no reliable test for it, and when these patients are the easy victims of respiratory infections, surgical procedures, depressant drugs and overexertion of all kinds, the number must be numerically significant.

305 East Third Street.

1. Edgeworth, Harriet: A Report of Progress on the Use of Ephedrine in a Case of Myasthenia Gravis, J. A. M. A. **94**: 1136 (April 12) 1930.

MALARIA TRANSMITTED BY HYPODERMIC SYRINGE

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The incidence of malaria in Nebraska is exceedingly rare, and the following explanation of how one new case originated seems quite interesting for that reason:

B. R., a man, aged 37, was seen, January 17, by students in the outcall service of the University of Nebraska College of Medicine, at the patient's home following a chill that lasted approximately one and a half hours. The only complaint at the time of this visit was a feeling of extreme exhaustion; the patient had a temperature of 102.5 F. At this time there was quite a widespread epidemic of influenza, and after a thorough physical examination had been made the students interpreted the chill to be evidence of the onset of this condition and prescribed accordingly. The patient slept reasonably well that night and remained in bed the following two days as he had been directed. January 20, the students were asked to see the patient again because of a chill very similar to the first. At this time they requested a consultant to attend the case with them. The patient stated that he had had intermittent chills and fever occurring at regular intervals and beginning about 5 p. m. on each occasion throughout the past two months. The latter six weeks he had been a patient in the county hospital and, according to his statement, malaria had been considered there with the result that several blood tests had been made, with negative results. The differential diagnosis at that time was between dysentery, hepatic abscess, empyema and malaria. The patient left the county hospital without being dismissed, because of dissatisfaction with his progress. As malaria seemed most probable, it was determined to make blood smears immediately, during this chill, and numerous organisms of the tertiary type were found. Previous to the report for the blood smears, 10 grains (0.65 Gm.) of quinine sulphate was given, which shortened the length of that chill to about one-fourth the duration of those preceding.

The patient had been in Omaha constantly during the past two years, and the history of past illnesses was irrelevant to the present complaint. Examination of the forearms showed that both basilic veins were partially thrombotic, and the patient confessed that he had been using morphine over the past six years. Questioned about other narcotic users who might have had access to his hypodermic equipment, he gave the name of one individual who, he said, began to have a series of chills and fever resembling his own about three days after they had jointly used this equipment.

A talk with the other patient, who had been transferred to another hospital, brought out the fact that six years before, while he was residing in Mexico, he had received two courses of quinine therapy for what he described as only a mildly incapacitating illness and which he remembered as being made up chiefly of chills and fever; between these attacks, as he

2. Boothby, W. M.: Myasthenia Gravis: A Preliminary Report on the Effect of Treatment with Glycine, Proc. Staff Meet., Mayo Clin. **7**: 557-560 (Sept. 28) 1932; Myasthenia Gravis: Second Report on the Treatment with Glycine, ibid **7**: 737-756 (Dec. 28) 1932.

3. Remen, L.: Zur Pathogenese und Therapie der Myasthenia Gravis pseudoparalytica, Deutsch. Ztschr. f. nervenh. **128**: 66-79, 1932.

From the Department of Internal Medicine, University of Nebraska College of Medicine.

remembered it, he felt entirely well and able to work. This evidence seemed to make the more recently appearing case the source of infection, and it is evident that B. R. served to activate the plasmodium which had been injected into him by the contaminated needle enough so that when they jointly used the hypodermic equipment on a second occasion he was able to introduce an organism of increased virulence into the primary carrier, which made his disease again active after having been quiescent over the past five years. B. R. has been severely ill over the past two months, whereas the other man has had but mild chills and fever.

There was recently reported at one of the hospital clinics another case of malaria definitely proved by the finding of the organism; the patient had had no contacts outside of Nebraska for five years, and it was at that time entirely unexplainable where or how the infection was acquired. In view of the course of events in the two cases here described, it might be that the case just mentioned and others which occasionally have puzzled physicians in the past can be explained on the basis of transmission by hypodermic syringe.

METHYLENE BLUE IN CARBON MONOXIDE POISONING

MILTON A. BELL, M.D., PHILADELPHIA

The recent reports on the use of methylene blue (methylthionine chloride, U. S. P.) in carbon monoxide poisoning and in cyanide poisoning prompted us to prepare and have available for use in the accident ward and on the ambulance 50 cc. units of a sterile, aqueous 1 per cent solution of the dye. This is the report of our first case in which this substance was used:

A white man, aged 53, brought by the police to the accident ward, March 3, 1933, at 12:20 p. m., had been found at noon in a room filled with illuminating gas; he was unconscious when found and had left a note stating that he was "ending it all," and timed the note at 11:05 a. m.; four jets of a gas range were found wide open. On admission to the hospital the patient was unconscious and cyanotic, with cold extremities; a feeble pulse could be palpated. He was immediately placed in shock-position and a mixture of oxygen (95 per cent) and carbon dioxide (5 per cent) was administered, and caffeine sodiobenzoate, 3¼ grains (0.25 gm.), was given by hypodermic injection. Up to this time the patient was totally unconscious, did not respond to painful stimuli and did not move his head or extremities. The pulse wavered in quality. At 12:25 p. m. we started the intravenous injection (by syringe) of the warmed methylene blue solution. When about 30 cc. had been given, the patient began to move his head and then his arms and legs, so that he had to be restrained. The injection of the dye was completed without any difficulty, taking about three minutes for the 50 cc. The pulse had picked up considerably. At 1 o'clock the patient responded with a mumble when questioned and moved a little in response to painful stimuli. At 2:30 he was examined by a neurologist, who made the following report: "The patient was stuporous. The extremities were in a hypertonic state in the proximal parts and hypotonic in the distal parts, as the hands and feet. The patient showed a rather interesting phenomenon, a cataleptic involvement in the upper limbs. These parts were molded in various positions and remained that way for some time. After about five minutes of irritation, the patient asked 'Where am I?' and responded to mild commands, as raising the arms and protruding the tongue. The pupils responded to light. There were no signs of paralysis of any of the limbs. The reflexes were present bilaterally. There was no Hoffmann or Babinski sign. Some increased tension in the muscles of the neck was noted. Impression: It will be interesting to follow this case as to the neurologic picture. The cataleptic signs and the hypertonicity may advance to a complete decerebrate rigidity picture. The treatment with methylene blue is a comparatively recent method and it will be instructive to observe the results."

By 6 o'clock the patient was mentally clear and answered questions intelligently. Cyanosis had disappeared. He was transferred at this time to the medical ward. Oxygen and carbon dioxide inhalations for five minutes every hour were kept up for twenty-four hours. Atropine sulphate, 1/150 grain (0.0004 gm.) was given every fourth hour the day after admission because of the appearance of râles in the chest; this condition cleared up. The patient continued to improve. No ill effects were noted from the use of the methylene blue solution. The neurologic signs entirely disappeared, and the patient was discharged as cured, March 10.

Laboratory studies were as follows: On the day of admission the blood sugar was 0.172 per cent; urea nitrogen, 15 mg. per hundred cubic centimeters; plasma carbon dioxide combining power, 46 volumes per cent; chlorides, 450 mg. Unfortunately, no test for carbon monoxide was done at the time of admission. By the next morning the blood sugar had fallen to 0.1 per cent and the carbon dioxide combining power was 53 volumes per cent. On the third day the blood was shown to be free of carbon monoxide (qualitative test). An electrocardiogram done on the third day showed depression of myocardial function (T waves of low voltage).

It might be of interest to add that about a year ago a patient, with a history very similar to this one at the time of admission, never regained consciousness, developed a picture of decerebrate rigidity (of which moving pictures were taken at the time), and died three days after admission.

York and Tabor roads.

From the Jewish Hospital.

Council on Pharmacy and Chemistry

ANNUAL MEETING OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council on Pharmacy and Chemistry of the American Medical Association held its annual meeting at the headquarters building, 535 North Dearborn Street, Chicago, Friday and Saturday, March 31 and April 1, 1933.

Dr. Reid Hunt was reelected chairman of the Council for one year and Dr. Torald Sollmann was reelected vice chairman.

Among the many items discussed during the meeting, the following may be of interest to both physicians and manufacturers:

Mutual Problems of the Council on Pharmacy and Chemistry and the Committee on Foods.—In order to prevent confusion in the action of the Committee on Foods, it is the general policy of that committee to follow the decisions of the Council automatically in cases in which a food product may have therapeutic usefulness. The Council adopted as a general policy the principle that the proprietor of a product which may be both a food and a drug be entitled to the use of only one seal on a package; that in cases in which the firm is entitled to the use of the seals of both the Council and the Committee on Foods, the seal of the Committee on Foods will be the seal recommended, and that if the seal of the Council on Pharmacy and Chemistry is desired, special consideration in each instance must be given by the Council on Pharmacy and Chemistry.

Rule 4.—Special consideration was given to the enforcement of rule 4, wherein it is provided that mention of nonaccepted products may not occur in advertising for Council-accepted products. The question had arisen whether or not packages of nonaccepted products might contain enclosures advertising accepted products. The Council went on record as being opposed to advertisements of accepted products in packages of nonaccepted products. The Council further declared that the inclusion of a name of an accepted product in the advertising of an unacceptable combination or mixture of which the accepted product is one of the components be not considered as constituting an infringement of rule 4, provided the Council acceptance of the accepted product be not indicated in any way in the advertisement or in the announcement; with the further provision that the claims made for the ingredient do not exceed those permitted by the Council for the accepted product.

The Use of the Bayer Cross by the Winthrop Chemical Company.—The Council went on record as objecting to the use of the Bayer Cross by the Winthrop Chemical Company on labels of Council-accepted products, as the use of the Bayer Cross is a means of promoting the advertising of the nonaccepted Bayer Aspirin.

Vitamin Preparations.—One of the Council's referees in charge of vitamin preparations presented the matter of vitamin dosage as it affects vitamins A and D. It was brought out in the discussion that the amount of vitamin A necessary to prevent symptoms of deficiency in man is very small; that the difficulty in experimental work where it is endeavored to obtain a state of A-avitaminosis is to obtain food sufficiently pure that no vitamin A accompanies it; that it requires only a minimal amount of A to prevent or cure night blindness, the first symptom of A deficiency; that in the matter of exploitation of certain vitamin A preparations and carotene preparations the dosage recommended appears to be excessive; that in reference to vitamin D it is known that overdosage may occur. In the case of vitamin A, evidence is not available whether or not there is danger from overdosage; as these vitamins are so potent for good, it is not illogical to assume that they might be potent for harm. It was brought out that there had been cases of carotenemia from an excess of provitamin A (carotene). The referee felt that the use of carotene, which is relatively cheap in price and potent, may lead to decided disadvantages. The Council requested the Secretary to call to the attention of firms marketing carotene the fact that there may be disadvantages in the large doses of carotene which have been recommended.

The Council reaffirmed its opposition to the use of the term "anti-infective" in reference to vitamin A. The Council has required that no advertising submitted to it for vitamin A preparations should be permitted to go beyond the claim that vitamin A is an *aid* in building up resistance; that mention of specific diseases or implied reference to respiratory diseases by mention of lowered resistance due to wet weather, drafts, etc., is objectionable. The Council's referee pointed out that controlled experiments in a large clinic had afforded no evidence to show that the use of cod liver oil or other vitamin A preparations caused a lower incidence of respiratory diseases. It was brought out that certain experiments with children indicate that properly prepared and controlled irradiated milk is more effective so far as antirachitic action is concerned than cod liver oil or viosterol in equivalent amounts as judged by potency in "rat" units; that the evidence, however, was not sufficient for the Council to take action at this time and the matter was made an item of business for the meeting a year hence.

The Council offered no objection to a variable ratio in the content of vitamins A and D in new commercial products such as halibut liver oil plus viosterol, and similar mixtures of vitamins A and D.

Names for Extracts Containing Vitamins A and D from Different Sources.—Concentrates of various types of vitamin A and D preparations which are coming on the market no longer contain vitamins from one source. One product before the Council contains concentrates of cod liver oil and halibut liver oil, to which has been added viosterol. The naming of such products in an acceptable manner required consideration. The Council voted that in case of tablets and similar preparations of concentrates containing vitamins A and D, firms be permitted to label these products as follows: Vitamins A and D Concentrates; with the understanding that the label should also contain a statement of the source of the vitamins and the units of A and D from each source.

Labeling of Liver Extracts.—The referee in charge of liver extracts emphasized that there was still not available any method of testing accurately the potency of liver extracts. The Council has required that liver extracts should be labeled as equivalent in antianemic potency to so much fresh liver. It was brought out that the objection that could be raised is that livers vary in their potency, such as fat livers and lean livers, and that perhaps horse liver, cow's liver, pig's liver and all the other kinds of liver used may vary in potency. Clinical responses also vary according to the patients.

The Council decided that the policy be continued of requiring firms to label liver extracts with a statement to the effect that a given amount of the product is equivalent in antianemic potency to that of a certain amount of fresh liver; and that all extracts at the time of submission be accompanied by protocols showing comparative antianemic efficiency.

Rationality of Combinations of Iron Salts and Liver Extracts.—The Council maintains its opinion that there is not sufficient evidence to warrant the Council's taking the position that the administration of liver extract, either by mouth or parenterally, enhances the response to iron therapy. The Council decided that the matter of the rationality of combinations of iron salts and liver extracts be held in abeyance until further evidence of the comparative value of simultaneous administration is forthcoming.

Copper-Iron Compounds.—It was reported that a search of the literature fails to reveal that, in man, the addition of copper to iron is of any therapeutic advantage. After a general discussion, the Council decided that in view of the lack of specific evidence of the value, in man, of combinations of copper and iron, the Council will not for the present accept combinations containing copper and iron.

Copper-Iron Patent.—The Council discussed the copper-iron patent of the Wisconsin Alumni Research Foundation. The Council feels that the issuance of this patent was unfortunate; that the use of the name of a distinguished university whereby there is given or implied scientific approval of a product not demonstrated to be effective is to be deprecated; that the government should not have issued the patent; and that the criticism of the Foundation is that it has patented and collected royalties on a product which in the opinion of the Council is of no originality and no established merit.

Special Names for Lines of Medication.—Several pharmaceutic houses have approached the Council with the idea of permitting proprietary names for a line of medications such as, for instance, Sucrets or Dulcets for certain types of candy medication. It was felt that the same principle should guide the consideration of these lines as in the case of individual articles presented to the Council. The firm which makes an important development in that particular field may have a proprietary name or distinctive brand name, but other firms should conform to a common nonproprietary designation for their respective lines.

Standardization of Antiseptics.—The standardization of antiseptics and disinfectants is in an unsatisfactory state. As the referee pointed out, tests of these substances with cultures in test tubes give no true indication of the effectiveness of the germicide or antiseptic when applied to tissues, when mixed with blood, saliva and exudates and when present in the body after oral administration or injection. The Council at this time is not in position to recommend the establishment or adoption of procedures for the standardization of antiseptics and disinfectants. On the other hand, manufacturers engaged in interstate commerce are required by the federal government to have their antiseptics and disinfectants tested according to the so-called F. D. A. method. The Council voted that the U. S. Food and Drug Administration methods of testing antiseptics and disinfectants, as stated in Circular No. 198, U. S. Department of Agriculture, be adopted by the Council under the same conditions as those relating to the previous adoption of the U. S. Public Health Service method of standardization of antiseptics and disinfectants.

Mouth Washes.—The action of the Council on Dental Therapeutics on mouth washes was discussed. The referee pointed out the pertinence of the remarks appearing in the report of the Council on Dental Therapeutics to the effect that normal persons have not been shown to be in need of oral antiseptics or astringents, and that their continued use may be harmful. He also pointed out that, in gargling, the fluid is not carried beyond the anterior pillars, nor is it effective in killing in appreciable amounts such pathogenic bacteria as may there exist. It was the consensus that the use of an antiseptic as a gargle was of no more value than the use of salt water or plain water; that there was no objection to gargling per se but that there was an objection when the gargling was presumed to be beneficial therapeutically because of antiseptic action; that during the time a so-called antiseptic solution was in the mouth it could exert no action which would have appreciable effect either from a prophylactic or therapeutic standpoint; that such effect as would come from gargling was mechanical and could be derived from any mild lavage either tasteful or distasteful; that while the Council does not believe that antiseptic gargles are effective therapeutically, this would not prevent their being used, if so desired, for cosmetic purposes. It was voted that the Council consider the available data for the antiseptic efficiency of gargles as unsatisfactory and, until acceptable proof

is brought forth, that the Council do not allow claims of therapeutic usefulness or prophylactic action of gargles.

Acceptability of Evidence from Certain Laboratories.—The question was raised of how much confidence the Council should put in the reports made for clients by commercial laboratories. Consideration was given to certain commercial laboratories which do not enjoy the full confidence of the Council. It was decided that reports or other evidence emanating from such laboratories and dealing with articles under consideration by the Council must be confirmed by independent data of an acceptable character. The Council also decided that reports from laboratories must be signed by a reputable, qualified worker who is personally responsible for the report and the recommendations contained therein; if the qualifications of the signer of the report are not known to the Council, the report must contain a statement of such qualifications for the information and guidance of the Council.

New and Nonofficial Remedies.—The Council discussed the matter of extensive revision of New and Nonofficial Remedies, 1934. It was brought out that New and Nonofficial Remedies, 1933, was issued this year three months ahead of the time the previous editions had been issued.

Reports of the Committees.—The Council considered the reports of the Committee on Therapeutic Research, the Committee on Nomenclature, and the Committee on Rules and Procedure. Each reported satisfactory progress.

The work of the Council has increased enormously, particularly during the depression. The vast amount of work that falls on Council members in the consideration of reports was discussed, together with methods whereby this might be lightened.

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

PAUL NICHOLAS LEECH, Secretary.

"THIO-ALBIN" NOT ACCEPTABLE FOR N. N. R.

"Thio-Albin," marketed by the Thiophene Laboratories, Inc., Chicago, was stated to be ". . . a thion caseinate, containing about 45 per cent of organic dry residue of thion and 55 per cent of casein." The firm presented no evidence to show that the component "Thion" differs essentially from sulphonated bitumen, N. F., or that, as claimed, "The active constituents of thion are sulfur bodies of heterocyclic nature."

In the advertising submitted by the firm at the time of presentation of "Thio-Albin" to the Council, the product was recommended *"in the treatment of* Secondary Anemia *and of* Intestinal Putrefaction" and "Disturbances *with* Dermatological Manifestations." As evidence for the value of the product, the firm submitted "A Clinical Investigation of the Effects of Thio-Albin upon Patients with Secondary Anemia" directed by C. B. S. Evans, A.B., M.D. This consisted of a study of sixty-nine patients, who were observed in a control period of ten days, after which "Thio-Albin" was administered in doses of 45 grains daily for periods up to three months, with frequent counts of erythrocytes, leukocytes and reticulocytes and the determinations of hemoglobin. With few exceptions, the study shows an increase in erythrocytes and in hemoglobin. The charts of every one of the sixty-nine cases were presented. Forty control cases were studied in a similar way during a period of three months. The average of the red blood cell count and the hemoglobin showed no notable change. The bare figures are rather impressive and, taken alone, would seem to justify the acceptance of "Thio-Albin" were the product otherwise acceptable. The Council's referee stated that he could not refute the statements made by Evans in the study of the sixty-nine cases, but that in the absence of evidence that "Thio-Albin" is essentially different from a sulphoichthyolate-casein preparation the Council could not accept the claim that "Thio-Albin" is an intestinal disinfectant, since such claim has not been recognized for sulphoichthyolate preparations.

"Thio-Albin" is obviously of the ichthyol-casein type, suggestive of "Ichthalbin," which was at one time advertised with claims of therapeutic value for a host of conditions.

The Thiophene Laboratories, Inc., was informed that, in the absence of evidence that "Thio-Albin" is essentially different from a sulphoichthyolate-casein preparation, the Council could not accept the claim that it is an effective intestinal antiseptic, and, further, that the product is unacceptable because the claims made for it are not supported by adequate evidence; because the statement of composition is indefinite in that it does not bring out the relation of "Thion" to sulphonated bitumen, N. F.; and because the proprietary, nondescriptive name "Thio-Albin" cannot be recognized.

When the Council's consideration of "Thio-Albin" was sent to the Thiophene Laboratories, Inc., the firm requested postponement of definite action so that it might obtain further evidence. It was explained to the firm that, in general, the Council postponed action concerning a product which had been found unacceptable if the distributor, in the meantime, discontinued active propaganda. Recently physicians have forwarded to the Council an advertising folder, "THIO-ALBIN For Secondary Anemia," which contains claims objected to in the Council's report.

The firm wrote (February 4) that the name "Thion" had been changed to "Thionon" and submitted a report in favor of the claim that "Thio-Albin" is a chemical compound and not a mixture, together with a report of a chemical examination of the constituent "Thionon" and of "Thio-Albin." After examination of these reports, the A. M. A. Chemical Laboratory reported that "Thionon" appeared to be one of those indefinite borderline substances which, while not strictly complying with the standards for sulphonated bitumen, N. F., yet resembles it in many respects. The Laboratory further pointed out that the name "Thio-Albin" is not an acceptable designation for a mixture or compound of a sulphonated bitumen preparation with casein.

It is difficult to determine what it is now intended to claim therapeutically for "Thio-Albin," for the firm wrote "We shall, in future, confine our claims to the results obtained in the report of Dr. C. B. S. Evans . . . and on further research we are making on secondary anemia." The Council's referee held that the firm has failed to show that "Thionon" differs essentially from sulphonated bitumen, N. F., and that the Council cannot accept any therapeutic claims for the product differing essentially from those that are recognized for the latter substance. It is not sufficient to show that the sulphur present is not in exactly similar forms; but it would be necessary to show that it has essentially different therapeutic actions, including those claimed for the preparation. The claimed effects of "Thio-Albin" in secondary anemia depend in part on its action as an intestinal disinfectant, and that claim cannot be accepted for a sulphoichthyolate-casein preparation. The treatment of anemia presents so many problems that the Council would not be justified in accepting a single clinical report for such inherently improbable claims; more especially since not widely different claims were made for ichthyol and were not found to be supported by acceptable evidence. In the absence of satisfactory evidence that "Thionon" differs essentially from sulphonated bitumen, N. F., the claims made for "Thio-Albin" cannot be accepted.

The Council voted to confirm its former decision that "Thio-Albin" be not accepted because it is marketed with claims that are not supported by acceptable evidence and under a name that is not descriptive of its composition.

When the foregoing report of the Council's consideration of Thio-Albin was sent to the distributor, the latter requested that publication be held in abeyance until such time as further experiments, clinical and chemical, could be completed. The firm stated that it was not the intention to promote actively the sale of Thio-Albin and expressed the hope that it would be able to present the Council evidence which would make the product acceptable. That was in October, 1932. In January, 1933, there was received in the Council's office an advertising booklet featuring Thio-Albin together with a line of "Thio" products of the Thiophene Laboratories, Inc. When informed of this, the firm disclaimed an intentional breach of faith with the Council. The booklet, however, could not be considered as anything but frank advertising propaganda, not only for Thio-Albin but for other unaccepted products. The Council was, in consequence, obliged to authorize publication of this report.

REPORTS OF OFFICERS

NOTE.—At the 1925 session of the Association, the House of Delegates suggested that all reports of officers, committees, etc., and resolutions to be brought before the House, if available, be published in advance of the session so as to permit careful consideration and discussion. — Ed.

REPORT OF THE SECRETARY

To the Members of the House of Delegates of the American Medical Association:

The following report of the Secretary is respectfully submitted:

MEMBERSHIP

On April 1, 1933, the list of members of the Association carried 97,111 names. Because the annual session last year was held in May, the number of members was reported to the House of Delegates as of March 1, 1932, at which time there was an enrolment of 99,470. During the year ended Dec. 31, 1932, the names of 8,877 new members were enrolled, while 9,972 names were removed from the membership list, of which 1,502 were the names of deceased members.

FELLOWSHIP

The number of names on the Fellowship roster on April 1, 1933, was 62,495, as compared with 64,712 reported as of March 1, 1932, at the New Orleans Session. During the year ended Dec. 31, 1932, 3,317 names were added to the Fellowship roster, while 5,259 were removed. These removals were due to the following: deaths, 796; nonpayment of dues, 1,198; resignations, 1,994; ineligibility, 1,271.

Apparently, practically all lapses in Fellowship because of nonpayment of dues and resignations were occasioned by the unfavorable economic situation. Three resignations were offered as "protests" against the policies of the Association, while several Fellows resigned because, as they stated, THE JOURNAL was available to them without payment of Fellowship dues.

On authorization of the Board of Trustees, the names of Fellows who have found themselves unable to make immediate remittance for Fellowship dues have been retained on the roster when they have specifically indicated their intention to remit within a reasonable time.

An accompanying table shows the number of counties in each state and territory, the number of component county medical societies in the several states and territories, the number of members in each constituent state medical association at the time the count was made, and the number of Fellows, including Honorary Fellows and commissioned medical officers of government services.

PROPOSED AMENDMENT TO THE CONSTITUTION

At the 1932 annual session, Dr. Southgate Leigh, delegate of the Medical Society of Virginia, submitted to the House of Delegates a proposal that Section 2 of article 5 of the Constitution be amended to provide that presidents of constituent state medical associations shall be ex officio members of the House of Delegates. In accordance with the provisions of article 12 of the Constitution, this proposed amendment will come before the House of Delegates for consideration at the present session and will require a vote of two thirds of the voting members of the House of Delegates for adoption.

FIELD WORK

A much greater number of requests for visits by members of the official bodies of the Association were received during the past year than in any previous year, and a far larger number of such visits were made than ever before in any similar period. The President and President-Elect, individual members of the Board of Trustees and other official bodies, and practically all members of the administrative personnel in the Association offices have appeared on the programs of county and district medical societies and of constituent state medical associations in nearly all parts of the country. In addition, official representatives of the Association have participated in a large number of conferences called by the officers of component societies and constituent associations.

IN APPRECIATION

As in previous years, the Secretary of the Association has received the most helpful cooperation from the officers of component and constituent societies, from members of the House of Delegates and from the officers and members of various councils and official groups, as well as from many individual members and Fellows of the Association, to all of whom a very sincere expression of grateful appreciation is now extended.

Respectfully submitted. OLIN WEST, Secretary.

Organization of Constituent State Associations

	Number of Counties in State	Number of Component Societies in State	Organization of Constituent State Associations: Number of Counties in State Not Organized		Number of Physicians in State 12th Ed. A.M.A. Directory	Number of Members of State Associations		Number of A.M.A. Fellows in State
			1932	1933		Mar. 1, 1932	Apr. 1, 1933	
Alabama	67	67	..	..	2,207	1,590	1,484	466
Arizona	14	12	1	1	494	353	340	215
Arkansas	75	63	9	9	1,977	851	818	360
California	58	39	15	14	10,109	5,077	5,123	3,642
Colorado	63	25	22	25	1,898	11,07	1,064	684
Connecticut	8	8	..	..	2,165	1,411	1,452	935
Delaware	3	3	..	..	278	178	193	113
Dist. Columbia	..	..	..	..	1,827	660	672	540
Florida	67	35	19	19	1,762	972	955	520
Georgia	161	97	49	49	2,888	1,843	1,477	613
Idaho	44	11	2	2	383	183	148	101
Illinois	102	93	5	6	11,382	7,304	7,262	4,910
Indiana	92	82	3	2	4,073	2,792	2,803	1,596
Iowa	99	97	..	..	3,125	2,425	2,221	1,350
Kansas	105	61	32	32	2,168	1,466	1,392	824
Kentucky	120	115	4	3	2,867	1,821	1,733	718
Louisiana	64	42	20	20	2,076	1,237	1,182	766
Maine	16	15	1	1	989	717	715	380
Maryland	23	22	..	1	2,480	1,462	1,599	850
Massachusetts	14	18	..	..	6,595	4,760	4,814	3,037
Michigan	83	54	5	5	5,589	3,507	3,545	2,219
Minnesota	87	35	2	2	3,075	2,251	2,220	1,499
Mississippi	82	21	3	4	1,567	1,010	881	321
Missouri	114	87	16	16	5,640	3,316	2,291	1,883
Montana	56	15	28	27	484	312	307	204
Nebraska	93	49	26	23	1,785	1,143	1,124	695
Nevada	17	5	12	12	131	107	93	60
New Hampshire	10	10	..	..	567	495	483	254
New Jersey	21	21	..	..	4,357	2,768	3,014	2,019
New Mexico	31	12	19	19	374	215	203	144
New York	62	60	1	1	21,008	13,070	13,036	9,007
North Carolina	100	88	2	2	2,372	1,622	1,538	725
North Dakota	53	13	10	10	515	383	376	280
Ohio	88	86	2	2	8,653	5,470	5,336	3,214
Oklahoma	77	64	12	12	2,484	1,612	1,528	722
Oregon	36	23	4	3	1,275	684	689	475
Pennsylvania	67	61	4	5	12,051	7,970	8,024	5,395
Rhode Island	5	6	1	1	844	491	497	359
South Carolina	46	42	1	1	1,292	823	861	346
South Dakota	69	12	12	11	585	303	240	198
Tennessee	95	64	18	20	2,962	1,547	1,463	703
Texas	254	133	64	68	6,475	3,702	3,608	1,910
Utah	29	8	20	20	489	363	341	217
Vermont	14	10	3	3	499	341	342	187
Virginia	100	52	12	12	2,584	1,830	1,811	887
Washington	39	22	15	15	1,920	1,404	1,354	827
West Virginia	55	29	5	5	1,782	1,187	1,134	596
Wisconsin	71	53	1	1	3,104	2,166	2,056	1,414
Wyoming	24	9	13	13	234	148	139	97
Alaska	..	..	..	..	47	22	15	14
Hawaii	5	4	1	1	288	187	207	98
Isthmian Canal Zone, Panama, Guam, Samoa, Virgin Islands	..	..	..	..	91	131	133	20
Philippine Islands (Provinces)	56	11	47	45	1,825	399	461	44
Puerto Rico (Dist.)	7	7	..	..	359	295	314	69
Foreign	..	..	..	..	.....	.....	...	202
Total	3,141	2,071	541	543	159,050	99,483	97,111	59,934
Commissioned Medical Officers and Honorary Fellows								2,561
								62,495

REPORT OF THE BOARD OF TRUSTEES

To the Members of the House of Delegates of the American Medical Association:

The year 1932 was in some respects an exceedingly trying period. The income of the Association was considerably reduced while the demands that were made on its various departments were even greater than in previous years. In view of the seriousness of the unfavorable economic situation and the possibility of the development of even more unsettled conditions in financial and business affairs, it was deemed advisable to conserve the resources of the Association to the fullest possible advantage and to curtail expenditures as much as could be done without reducing the quality of the Association's publications and without lessening the quality and scope of its service for the benefit of its constituent and component societies and its general membership. In some departments it was not possible to meet growing demands without increasing operating expenses; in other departments the greater demands were met with no larger expenditures or with actual reductions in operating costs.

The reports of the Treasurer and of the Auditors will be found appended to this report. The total income for the year 1932 was $1,634,848.31, an amount less by $193,936.61 than in 1931. Total expenditures in 1932 were $1,541,005.56, which represents a reduction in expenditures of $58,125.64 as compared with 1931.

The income from dues and subscriptions was less in 1932 by $61,060.53, and the decrease in advertising income compared with the previous year was $122,244.56. Unusual expenditures were required for legal services in defense of suits brought against the Association, two of which were finally disposed of during the year. The successful conclusion of the suit of Baker of Muscatine, Iowa, was a triumph for scientific organized medicine. A considerable part of the outlay for legal services was incurred in preparation for defense of suits brought by John R. Brinkley of Kansas, by P. L. Clark of Chicago and by the Ora-Noid Company. Another unusual item of expense is that involved in the maintenance of the biographic records of the Association and in the compilation of material for the Thirteenth Edition of the American Medical Directory, which, under ordinary circumstances, would have been published during the year. Publication was delayed because it seemed evident that it would not be possible to effect sales enough to cover actual publishing costs. It has been necessary, however, to retain a part of the personnel of the Directory Department and to proceed with the compilation of biographic data for everyday use and in order that it may be available when the publication of the Directory is undertaken. The extension of field service necessitated expenditures larger than those of previous years. The loss incurred in the publication of the QUARTERLY CUMULATIVE INDEX MEDICUS was greater in 1932 than in 1931 by about $14,000, owing to the fact that all the work of preparing the material for the INDEX was done in the Association's offices. The excess of expenditures over income involved in the publication and distribution of the special journals in 1932 was $32,875.44. The amount expended for first class postage in 1932 was larger by approximately $3,000 than in the previous year, while the expenditure for second class postage was approximately $4,000 less, so that there was a slight reduction in expenditures for this purpose. Expenditures for paper in 1932 amounted to $217,029.59, as compared with $257,433.05 in 1931. The amount expended for salaries and wages in 1932 was less by the sum of $12,359.92 than in the preceding year.

The net gain recorded for the year was $93,842.75, which represents the difference between total income and total expense. Of this amount, the sum of $74,967.03 was realized as interest on investments. This item, it will be seen, represents the larger part of the net gain, the remainder of which is more than accounted for by the reduced costs of paper. It is apparent that had the subscription price of THE JOURNAL been reduced by as much as $1 and had the cost of paper been maintained in accordance with the prices stipulated in the Association's contract, the cost of operation for the year would have been greater by several thousand dollars than the income received from all sources.

An earnest effort was made to effect all possible economies short of impairing the quality of the Association's publications and curtailing the service of its councils, bureaus and departments. This effort will be continued during the current year and to that end the Board of Trustees has reduced all salaries in excess of $100 a month.

Examination of the reports of the Treasurer and of the Auditor will reveal that at the end of the year the Association had invested in bonds the sum of $1,895,831.38. An appraisal of the Association's investments on December 15, 1932, showed that at that time the total depreciation had amounted to less than 6 per cent, which is believed to be far less than the amount of depreciation in securities held by most other corporations. About February 15, 1933, there was a general decrease in the market value of practically all bonds. Up to the time when this report was prepared, only two issues of bonds held by the Association had defaulted in payment of interest, and there is good reason to believe that both of these issues will resume interest payments when conditions have become more nearly normal and that the bonds will be redeemed on maturity.

The Journal

In a period when numerous periodicals have succumbed to financial stress, when standards of advertising have been broken down because of financial need, when illustrations have been discontinued or reduced and the numbers of pages greatly diminished to decrease budgets, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has come through with standards unimpaired, giving to its readers even a greater service than in previous years, holding the leading place generally accorded it in all surveys of medical journalism. There has been no decrease in the number of pages of reading matter in a volume.

TABLE 1.—*Approximate Count of Fellows and Subscribers on The Journal Mailing List, Jan. 1, 1933; Also Gain or Loss During 1932*

State	Fellows	Subscribers	Totals	Gain for Year	Loss for Year
Alabama	452	188	640	..	64
Arizona	198	88	286	..	24
Arkansas	337	127	464	..	60
California	3,432	2,132	5,564	..	120
Colorado	646	247	893	..	52
Connecticut	906	522	1,428	..	10
Delaware	105	48	153	5	...
District of Columbia	538	488	1,026	..	32
Florida	526	250	776	..	8
Georgia	606	291	897	..	61
Idaho	93	89	182	..	3
Illinois	4,705	2,278	6,983	..	372
Indiana	1,507	571	2,078	..	88
Iowa	1,247	439	1,686	..	103
Kansas	765	275	1,040	..	89
Kentucky	671	283	954	..	44
Louisiana	688	214	902	6	...
Maine	371	112	483	..	18
Maryland	806	427	1,233	..	25
Massachusetts	2,853	1,250	4,103	..	102
Michigan	2,085	944	3,029	..	169
Minnesota	1,354	523	1,877	..	92
Mississippi	281	95	376	..	35
Missouri	1,799	787	2,586	..	107
Montana	169	110	279	..	...
Nebraska	652	353	1,005	..	65
Nevada	59	27	86	1	...
New Hampshire	251	74	325	2	...
New Jersey	1,942	1,219	3,161	21	...
New Mexico	141	61	202	..	6
New York	8,520	4,743	13,263	16	...
North Carolina	660	275	935	..	99
North Dakota	230	85	315	..	28
Ohio	3,055	1,409	4,464	..	157
Oklahoma	631	202	833	..	84
Oregon	432	247	679	..	33
Pennsylvania	5,224	2,102	7,326	..	177
Rhode Island	352	160	512	10	...
South Carolina	316	154	470	..	10
South Dakota	180	131	311	..	29
Tennessee	640	342	982	..	41
Texas	1,691	732	2,423	..	25
Utah	186	80	266	..	...
Vermont	187	102	289	15	...
Virginia	853	338	1,191	..	100
Washington	759	300	1,059	..	45
West Virginia	559	208	767	..	47
Wisconsin	1,268	687	1,955	..	23
Wyoming	89	51	140	2	...
U. S. Army	..	172	172	..	...
U. S. Navy	..	205	205	..	45
Alaska	14	14	28	..	1
Canada	20	755	775	109	...
Cuba	4	53	57	..	12
Hawaii	87	66	153	2	...
Mexico	10	82	92	..	25
Panama	18	27	45	..	2
Philippine Islands	47	84	131	..	82
Puerto Rico	68	32	100	..	4
Virgin Islands	1	4	5	..	...
Foreign	142	2,153	2,295	..	250

Moreover, through efficient management, THE JOURNAL has continued to develop sufficient income to carry on the multitudinous activities of the American Medical Association.

The problem of the physician who subscribes to medical publications is to secure the maximum of usefulness with the funds available. As a result of several surveys of medical journalism made by different organizations, Dr. Fielding H. Garrison was able to say that THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is, in respect to quantity and variety of material and illustrations, most reasonable of all in price. During 1932, THE JOURNAL extended its service to readers in several ways.

TABLE 2.—*Physicians Receiving The Journal* *

State	Number Receiving Journal	Physicians in State 12th A. M. A. Directory	Approximate Percentage Receiving Journal
Alabama	640	2,207	29
Arizona	286	494	57
Arkansas	464	1,977	25
California	5,564	10,109	55
Colorado	893	1,898	47
Connecticut	1,428	2,165	65
Delaware	153	278	51
District of Columbia	1,026	1,827	57
Florida	776	1,762	45
Georgia	897	2,888	31
Idaho	182	383	45
Illinois	6,983	11,382	61
Indiana	2,078	4,073	50
Iowa	1,686	3,125	54
Kansas	1,040	2,168	49
Kentucky	954	2,867	34
Louisiana	902	2,076	43
Maine	483	989	48
Maryland	1,233	2,480	49
Massachusetts	4,103	6,595	62
Michigan	3,029	5,589	54
Minnesota	1,877	3,075	60
Mississippi	376	1,567	23
Missouri	2,586	5,640	46
Montana	279	484	56
Nebraska	1,005	1,785	56
Nevada	86	131	66
New Hampshire	325	567	58
New Jersey	3,161	4,357	74
New Mexico	202	374	51
New York	13,263	21,008	63
North Carolina	935	2,372	39
North Dakota	315	515	63
Ohio	4,464	8,653	52
Oklahoma	833	2,484	33
Oregon	679	1,275	52
Pennsylvania	7,326	12,051	61
Rhode Island	512	844	64
South Carolina	470	1,292	36
South Dakota	311	585	51
Tennessee	982	2,962	34
Texas	2,423	6,475	37
Utah	266	489	55
Vermont	289	499	55
Virginia	1,191	2,584	48
Washington	1,059	1,920	56
West Virginia	767	1,782	42
Wisconsin	1,955	3,104	63
Wyoming	140	234	60

* This table gives the number of physicians (based on the Twelfth Edition of the American Medical Directory) in the United States, the number receiving THE JOURNAL and the approximate percentage in each state. Copies to physicians in the United States Army and the United States Navy are not included.

A series of articles indicating the present status of our knowledge of vitamins attracted world-wide attention. The department of Queries and Minor Notes made available to numerous practitioners in isolated communities consultation with authoritative sources and served as a practical guide to an enormous number of interested readers, who expressed their appreciation of the practicality of this department by individual letters to the editor.

It is now generally recognized that THE JOURNAL is the only medical publication with a complete service in the field of foreign correspondence, an especially important feature at a time when economic conditions affecting the profession abroad are of the greatest interest to American medical readers.

Special issues of THE JOURNAL were published covering hospitals, medical colleges and licensing boards, clinical and radiologic laboratories, and the features of the annual session.

During the year, with the cooperation of the Bureau of Medical Economics, a department was fully developed to provide readers with prompt information concerning new forms of medical practice. Numerous letters from readers indicate the exceedingly valuable nature of this department.

On numerous significant questions in which it was desirable to establish promptly the policy of organized medicine, the Board of Trustees has made its decision after a complete presentation of the available data, and the policies expressed by THE JOURNAL have been the policies of the organization as defined through the Board. Such action was especially important in relationship to the attitude of THE JOURNAL on the Report of the Committee on the Costs of Medical Care, on the Report of the Commission on Medical Education and on such problems as legislation concerning hospitalization of veterans and the prescription of alcohol by physicians. All of these policies have been adequately expressed in the editorial columns of THE JOURNAL with sufficient promptness to permit physicians throughout the country to express their individual points of view to their representatives in state and national legislative bodies.

The approximate count of Fellows and subscribers carried on the mailing list of THE JOURNAL is shown by states in an appended table in which the gain or loss of Fellows and subscribers in each state is indicated.

A second table shows the number of physicians receiving THE JOURNAL in each state.

The total number of copies of THE JOURNAL printed in 1932 was 4,788,903, and the average number of copies printed weekly during the year was 90,360. The decrease in the number of subscriptions to THE JOURNAL as compared with the previous year was less than 3,000.

The Special Journals

During 1932, the special periodicals of the American Medical Association, now representing eight well established specialties, have maintained the high status of previous years. These periodicals are issued primarily to advance the science of medicine through affording a medium of publication for research in both laboratory and clinic. During 1932, only two of them yielded any profit and that so slight as to be of little comfort in meeting the losses sustained by the others. Nevertheless the total loss is not great, since the most rigid economy has been practiced in publishing these periodicals and the number of forms per issue limited somewhat.

The editorial boards have served devotedly in maintaining these periodicals at the highest possible point. Surveys of medical literature by competent authorities indicate that practically every one of these periodicals is a leader in the field which it serves and that their cost to subscribers is less than that of similar periodicals of comparable quality.

During the year a new editorial board was developed for the ARCHIVES OF INTERNAL MEDICINE. It has established the policy of emphasizing clinical investigation of a high type and of practical value to the internist.

In several instances, research institutions and individual physicians have aided the publication of special articles in the various periodicals devoted to the specialties. The Board of Trustees makes grateful acknowledgment to them and to the members of the editorial boards of the special journals for the efficient service they have rendered and continue to render to the Association, and to the promotion of scientific medicine.

Only two of these journals produced incomes larger than the costs of publication—the ARCHIVES OF OTOLARYNGOLOGY and the AMERICAN JOURNAL OF DISEASES OF CHILDREN. Only one of the special journals recorded an increase in circulation for the year, namely, the ARCHIVES OF NEUROLOGY AND PSYCHIATRY. All other journals of this group showed a decrease in circulation as follows:

Archives of Internal Medicine	277
Archives of Pathology	95
Archives of Surgery	122
American Journal of Diseases of Children	385
Archives of Ophthalmology	184
Archives of Otolaryngology	259
Archives of Dermatology and Syphilology	70

The total circulation of all special journals on December 31, 1932, was 21,211.

The Quarterly Cumulative Index Medicus

With the beginning of 1932, the cost of publication of the QUARTERLY CUMULATIVE INDEX MEDICUS, including its production, printing and circulation, was borne entirely by the American Medical Association. In accepting full responsibility for the publication of this most valuable contribution to medical bibliography, research and practice, much additional work was

brought into the library. Approximately 600 periodicals that had previously been indexed in the Army Medical Library were taken over by the staff of the American Medical Association. Obviously, this required an expansion, but by reorganization and systematization of the work it became possible to undertake the indexing of the additional publications without greatly enlarging the staff. Thus far, three additional persons, including one indexer of foreign languages, one typist and one messenger, have been required. However, the development of additional publications and the demand for more intensive indexing indicates the possible necessity of one or two additional employees during the coming year.

The value of the INDEX MEDICUS to medical literature and the vast amount of its usefulness were indicated by a considerable demand on the part of numerous librarians for an edition to be published on a special rag paper, which would have more durability. Since this would bring about, additional costs, circular letters were sent to all librarians who subscribe to the INDEX, asking how many would be willing to make an increased appropriation for the purchase of such an edition. Because of the present financial conditions, an insufficient number of librarians expressed themselves as willing to subscribe to a more costly edition, so that this project was not undertaken. However, without additional cost an improvement was made in the quality and durability of the binding.

The total number of periodicals now regularly indexed approximates 1,300, which does not include bulletins of health departments of county medical societies, or similar publications, but only scientific medical periodicals in all the languages of the world containing original contributions to medical literature. The number of copies of the QUARTERLY CUMULATIVE INDEX MEDICUS distributed in 1932 was 2,048, as compared with 2,182 in 1931. The loss incurred through the publication of the INDEX was $43,435.89.

Hygeia

HYGEIA, the Health Magazine, published by the Association, is now firmly established as the leading periodical in its field. Notwithstanding a severe financial depression, the magazine maintained fairly well its circulation during 1932 and, as indicated by the financial report, yielded a small profit to the Association. This is especially significant, since no other health magazine conducted along sound scientific lines, with a circulation national in scope, has ever had such an enviable, enduring record.

In April, 1933, HYGEIA celebrated its tenth birthday. The Association may well be proud of its record. The periodical was established as an educational publication to serve as a liaison between the medical profession and the public. In the ten years of its life, HYGEIA has proved its ability to meet this obligation. Its pages have been replete with information concerning the prevention of disease. It has created in the minds of many not only respect but admiration for the accomplishments of scientific medicine. It has constantly opposed and exposed quackery. Today it is received in hundreds of schools, where it is used in teaching health and as a basis for projects in science and in writing.

During the year, HYGEIA has developed in accordance with modern typographic art and is considered by leading critics a fine example of the best in modern publication.

It is indeed gratifying to the Board of Trustees to be able to report that the income received through subscriptions to HYGEIA and through the sale of advertising space was greater than production costs by the sum of $18,768.62.

American Medical Directory

Because of unsettled business conditions it was decided to postpone the publication of the Thirteenth Edition of the American Medical Directory. It seemed apparent that it would be impossible to effect a volume of sales large enough to prevent severe loss. It is hoped that it will be possible to proceed with publication during the current year in order that there shall be no serious break in the provision of the useful information contained in the Directory. It has been necessary to continue with the compilation of the biographic data used in the Directory. The possession of this information has become essential in the everyday work of the Association for its own purposes and for the purposes of constituent associations and component societies and other important organizations.

A Supplement to the Twelfth Edition of the Directory was issued, Nov. 15, 1932, containing 238 pages and listing approximately 8,000 new names and the names of more than 4,000 deceased physicians. Since the Twelfth Edition of the American Medical Directory appeared in May, 1931, 10,623 new names have been recorded by the Biographic Department, together with 36,436 changes of address.

The Library

With the beginning of 1932, the work of the library had expanded so greatly that it was necessary to take over the space formerly occupied by the assembly room and to utilize the N. S. Davis Memorial Room for the employees' circulating library. The additional space thus made available permitted greater facility in the conduct of both the QUARTERLY CUMULATIVE INDEX MEDICUS and the general library services.

The library services here mentioned are of immediate practical value to every physician who subscribes to the work of the Association. The package library service furnished 2,508 packages to physicians throughout the country during 1932, an increase over 1931. These requests come largely from physicians in smaller communities who do not have access to competent medical library service. However, the quality of the material and the promptness with which it is provided also cause many physicians in larger communities where good medical libraries are available to make use of the service of the package library. Thus, numerous requests are received even from physicians in New York, Chicago, Boston and Brooklyn, in which excellent medical libraries are available, because, no doubt, the package library service permits the physician to have available a vast amount of research material in his own workroom or library at home. Letters are being received constantly which indicate emphatically that this service is one of the most important rendered by the Association to the individual physician. It aids him not only in the preparation of manuscripts for reading before county medical societies or for publication in medical periodicals but also in the care of difficult or unusual cases. During the same period, several state medical societies established individual medical package library services, which served, no doubt, to some extent to relieve the burden on the headquarters office.

The package library service is supplemented somewhat by the periodical lending service. During 1932, 7,385 periodicals were sent out on loans. The Association makes available to its members and subscribers not only the periodicals regularly listed and abstracted in THE JOURNAL but also the 1,300 periodicals that are regularly received by the QUARTERLY CUMULATIVE INDEX MEDICUS and indexed in that publication.

The library also answered approximately 3,500 letters requesting bibliographic information that was not provided through the package library service or through the periodical lending division. The circulating library maintained for employees a total circulation of 6,540 books for the year.

As was pointed out previously, the library now occupies practically all available space on the fifth floor of the headquarters office. The space available at present is used to the utmost.

Cooperative Medical Advertising Bureau

The journals of thirty-two constituent state medical associations are now served by the Cooperative Medical Advertising Bureau. The net earnings of the Bureau for 1932 were $24,346.64, approximately 26 per cent less than in the previous year. Of this amount, the sum of $9,200 was distributed among the journals represented in the Bureau, this distribution having been made in amounts proportionate to the total amount of advertising business secured for each of the journals. Operating costs of the Bureau amounted to $15,146.64.

Mailing and Order Department

During 1932, 918,460 pieces of first class mail were sent out from the Association's offices, together with 594,744 pieces of third class mail, making a total of 1,513,204 pieces that were passed through the canceling machine. Approximately 20,000 additional pieces of outgoing mail coming in these two classifications were handled. There was a considerable decrease in the number of pieces of first class mail as compared with the previous year because, in the interest of economy, certain kinds of matter were sent as third class rather than as first class

mail. In addition to first class mail, 133 tons of mail in other classifications were forwarded during the year.

Orders for miscellaneous publications of the Association were handled to the number of 58,327.

Continuation of Fellowship and Subscription

The By-Laws of the Association provide that a Fellow who, for one year, has failed to pay his annual Fellowship dues shall forfeit his Fellowship thirty days after notice of his delinquency has been mailed to his last known address. The regulations of the Post Office Department require that when a subscriber is in arrears for a period of one year the publication to which he has subscribed shall no longer be sent to him through the mails.

Because of the disastrous effects of the unfavorable economic situation on the incomes of physicians, a comparatively large number in various parts of the country notified the Association that they were not in position to make immediate payment of Fellowship dues and subscription. A ruling was secured from the Post Office authorities to the effect that the Association might continue to send THE JOURNAL to those in arrears who would offer a definite promise to pay within a reasonable time. In the opinion of the Board of Trustees, the situation was one that justified at least a temporary disregard for the provisions of the By-Laws, and the names of Fellows who found it impossible to make immediate remittance for Fellowship dues and for subscription to THE JOURNAL were continued on the Fellowship roster and THE JOURNAL has been sent to them. The Board of Trustees would ask the approval of the House of Delegates for this procedure.

Council on Pharmacy and Chemistry

WILLIAM AUGUST PUCKNER

For twenty-seven years, William August Puckner was the Secretary of the Council on Pharmacy and Chemistry. His service was continuous from the time the Council was organized until the day of his death, which occurred on Oct. 1, 1932. No man ever devoted himself more entirely to his task than did Professor Puckner. His every official act was characterized by fearless championship of scientific truth, scrupulous fairness and absolute devotion to duty.

SECRETARY OF THE COUNCIL

Dr. Paul Nicholas Leech, who has been Director of the Association's Chemical Laboratory since this laboratory was established, was elected to succeed Professor Puckner as Secretary of the Council. Dr. Leech retains the directorship of the Laboratory.

THE WORK OF THE COUNCIL

The work of the Council has proceeded along the well established lines that have been followed heretofore but, because of the constantly increasing knowledge in the fields of chemistry, pharmacology and physiology, and because of the widening scope of the advancement in all fields of scientific medicine, the work of the Council has become more complex and more important year after year. The best manufacturers of therapeutic products have increasingly applied scientific methods in the investigations and experiments preliminary to production and in the processes of manufacture. More and more they are seeking the approval of the Council for their products and are appealing to the Council to pass judgment on proposed new therapeutic agents. The medical profession generally is undoubtedly inquiring more closely into the merits of the materials that are available for therapeutic uses and is inquiring more closely than ever before whether or not the preparations that are offered have been accepted or rejected by the Council on Pharmacy and Chemistry. Because of these facts, there has been a very definite and constant increase in the amount and in the scope of the Council's work during the last several years. This increase was particularly marked in the year 1932, for which reason it became necessary to make additions to the administrative personnel in the Council's offices. The demands made on the time of individual members of the Council have become so great that it has been necessary to provide facilities whereby much of the detail work formerly done by these members can be done in the headquarters office.

PUBLICATIONS OF THE COUNCIL

New and Nonofficial Remedies.—New and Nonofficial Remedies, in which appears the official list of products accepted by the Council, is published annually. This volume contains descriptions of articles which stand accepted on January 1 of the year of issuance. Descriptions as well as reports on articles rejected are first published in THE JOURNAL, so that at any time it is possible for the profession to know the latest decisions of the Council. A supplement to New and Nonofficial Remedies is published twice each year, and at the time of reconsideration each year of the annual quota of accepted products, statements concerning the general classifications under which various products are described are scrutinized and brought up to date with the best current medical knowledge. New and Nonofficial Remedies is thus made a valuable reference book for everyday use by the physician.

Council Reports.—The Council issues three kinds of reports: (*a*) those presenting a statement of the Council's consideration of a product rejected or omitted from New and Nonofficial Remedies; (*b*) those giving preliminary statements of the status of products which show promise of being useful but which are not at the time ready for acceptance, and in which it is attempted to outline proper standards for products under consideration and to indicate the evidence needed to establish their usefulness in medicine; (*c*) those concerned with general questions of current interest to the medical profession.

The Council also issues reports on the consideration of articles that have been submitted by manufacturers and found unacceptable. These reports are always submitted to the manufacturers concerned before publication. Reports on articles that have not been submitted for consideration by the Council and that are not believed to be meritorious or that are thought to be harmful are also published, but these are not submitted to the manufacturers before publication. Reports are also issued on rejected articles, including those omitted from New and Nonofficial Remedies and those which have not borne out the promise of therapeutic usefulness under which they may have been accepted.

During the year, a series of articles on the vitamins, prepared under the auspices of the Council, was published in THE JOURNAL, and a booklet entitled "Hospital Practice for Interns," in the preparation of which the Council on Pharmacy and Chemistry collaborated with the Council on Medical Education and Hospitals, was made available for distribution.

Among the noteworthy preliminary reports issued by the Council during the year was that on Thorotrast, a thorium dioxide preparation proposed for intravenous use as a roentgenographic medium. As a result of the investigations made preliminary to the publication of this report, the Council rejected this product for intravenous use and postponed further consideration of its possible usefulness when otherwise administered until further evidence of its safety and effectiveness may become available.

Four special reports were issued by Council during the year, three of which are of exceptional value. These include "Comparative Studies on Mercurochrome," "The Dangers of the Injection of Iodized Oils," and "Sulpharsphenamine: Its Uses and Limitations." In the studies leading to the publication of these reports, the Council had the generous and valuable cooperation of a number of the best qualified practitioners and teachers in various special fields.

Other publications of the Council include Useful Drugs, a book designed to meet the demand for a less extensive materia medica and to supply a brief discussion of the actions, usages and doses of a selected list of therapeutic drugs, which has gone through eight editions; the Epitome of the U. S. Pharmacopeia and National Formulary, now in its fourth edition, designed to give information needed by the practicing physician concerning the drugs described in the two books of standards from which this publication takes its name, and presenting a brief statement of the actions, uses and dosage of each drug together with an estimate of its therapeutic usefulness; and Investigations of the Therapeutic Research Committee, comprising reprints of articles published as a result of investigations supported wholly or in part by funds provided through the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry.

COMMITTEE ON THERAPEUTIC RESEARCH

The Committee on Therapeutic Research is a standing committee of the Council, which attempts to encourage scientific investigations in the field of therapeutics by providing funds for the prosecution of necessary research.

During the year 1932 the Committee made sixteen new grants. A detailed list of these grants together with a list of publications during 1932 and of unexpired grants made before Jan. 1, 1932, will be found in the appendix of this report.

The Chemical Laboratory

The Chemical Laboratory during the past year has been chiefly concerned with the examination of products referred to it by the Council on Pharmacy and Chemistry and by the Bureau of Investigation. Because of the great number of products submitted to the Council and because of the complexity of many of the chemical problems involved, the facilities of the Laboratory were taxed to the fullest extent in meeting demands.

During the year a large number of products referred to the Laboratory by the Council on Pharmacy and Chemistry were examined, and carefully elaborated standards were established. Among these, the more important were a new local anesthetic, certain medicinal dyes, barbital derivatives, theophylline compounds, and a new synthetic homologue of ephedrine. Bismuth compounds for use in the treatment of syphilis, which have become more complex in character, have required much attention by the Laboratory personnel. The examination of dextrose preparations was continued and, as a result of this work, the quality of the mixture or the statement of composition was changed by the manufacturers of such preparations.

Cooperating with the Bureau of Investigation, a number of nostrums offered for sale to the public were examined during the year and, in some instances, analyses required the development of entirely new methods.

Members of the Laboratory staff published articles in leading scientific periodicals, and the director and other members of the personnel have delivered addresses dealing with medical chemistry before a number of scientific organizations and school and university groups.

Council on Physical Therapy

During the years immediately following the World War, largely as the result of the interest created in some of the methods utilized in military medical service involving physical reconstruction and rehabilitation, there was a large production of machines and apparatus of various kinds which were insistently urged on the profession and the public as being useful in the treatment of many diseases and disabilities. While the more simple and useful measures of massage, heat and exercise appeared to be largely forgotten, there was a widespread resort to the use of "machine therapy." Comparatively few physicians recognized the real value of physical therapy and the need for its application under proper restrictions. A comparatively large number of physicians, not having access to authentic information, purchased machines and apparatus and used them extensively in their practice, hoping to find them useful in the treatment of those conditions for which their application was advertised as beneficial. Machines came into the hands of many unqualified persons and were extensively advertised to the public for self use.

A resolution submitted to the House of Delegates of the American Medical Association in 1925 set forth the apparent need for the creation of some official body that might attempt to bring about a rationalization of physical therapy. This resolution, adopted by the House of Delegates, recommended that a Council on Physical Therapy be established under the direction of the Board of Trustees. The Council was organized in September, 1925.

Gradually, as its knowledge and the scope of its functions have increased, the aims and the purposes of the Council have become threefold: first, to protect the profession and the public from misleading and deceptive advertising in connection with the manufacture and sale of devices for physical therapy; second, to disseminate such reliable information as the Council may possess or acquire and to stimulate instruction designed to aid the practicing physician in the choice and application of sound methods of physical therapy and influence the extention of such instruction in medical schools, and, third, to act in an advisory capacity to the profession and the public in matters pertaining to this particular field of therapy.

Much of the time of the Council has necessarily been devoted to the consideration of physical therapy apparatus, including that which has been submitted by manufacturers with a view to securing the Council's acceptance and that which is offered for sale without submission. It has, of course, been necessary to examine a large mass of evidence and to determine its scientific value. An earnest effort has been made to make proper evaluation of all material in the nature of evidence that has been submitted to the Council, to safeguard the interest of reputable manufacturers and, at the same time, to protect properly the interests of scientific medicine and of the public.

The Council has been constantly confronted with problems the solution of which has been extremely difficult and with others for which no solution has yet been found. In some instances it has been found necessary to devote months to the investigation of apparatus and of the claims made for it and, in a few instances, these investigations have extended over several years and are still in progress.

During the past year the Council considered and accepted or rejected a larger number of devices than had been finally dealt with in the previous seven years of its existence. Nonacceptance of devices submitted to the Council has usually been due to the fact that scientific investigation has failed to prove the soundness of the claims made for them or that the Council has found that certain objectives claimed for the device or apparatus are fully justified while no reasonable basis can be found for other claims. In some instances, approval of apparatus has been withheld because of the objectionable nature of advertising material used by the manufacturers. In a number of cases the requirements of the Council with respect to the nature of advertising have been met by some manufacturers, while they have not been agreed to by others. It is gratifying that the Council has received cordial cooperation from most of the reputable manufacturers of physical therapy apparatus, and it is believed that this cooperation has been of real value to all concerned and, if properly continued, will result in the solution of a number of important problems which, because of their comparative newness, are now perplexing.

The investigations of the Council have shown that there is much virtue in physical therapy methods when properly applied. This fact should be recognized by the profession and these methods should be utilized when definitely indicated. It is now the opinion of the Council that most of these procedures properly belong in the hands of physicians who are well qualified because of actual experience and a scientific understanding of the principles involved and also because of their scientific knowledge of the pathologic conditions in the treatment of which physical therapy methods are properly used.

During the year the Council completed the preparation and publication of the Handbook of Physical Therapy, in which many valuable and authoritative reports have been brought together. A list of definitions has also been formulated, in the preparation of which the Council has had the cooperation of the American Standards Association. The Council has aided in research and, as a result of information thus secured, the recommendation for a standard of measuring ultraviolet radiation has been placed before the International Congress on Light. Through certain research studies aided by the Council, the antirachitic value of radiations of certain wavelengths has been established. Much consideration has been given to anesthesia apparatus, air conditioning apparatus, oxygen therapy apparatus, respirators, resuscitation apparatus, inhalators and pollen filters. The Council has taken the position that the indications for and the use of electrosurgery will best become known through clinical experience and scientific investigation rather than through high pressure advertising or the operation of so-called clinics under the auspices of manufacturers of electrosurgical machines. Most of these manufacturers have agreed to discontinue the holding of such "clinics."

Cordial cooperative contacts have been established and maintained with various important scientific groups, and the Council is greatly indebted to a number of physicians in various parts of the country who have rendered most valuable assistance in promoting its work.

Bureau of Medical Economics

During 1932, medical economic problems, schemes and studies were projected in many sections of the United States in hitherto unknown numbers. The problems that presented themselves were not all the result of current social and economic conditions but were, in some instances, the culmination of long

standing and gradually developing practices. The schemes, which were promulgated in the guise of cures for certain alleged faults in the administration of medical service, represent a rapid extension of commercialism into the provision of medical services. The studies initiated represent an awakening of the medical profession to the importance of medical economic problems and an endeavor, on the part of some medical societies, to discover the correct diagnosis and the appropriate cure for economic ills, if and where they exist.

The work of the Bureau of Medical Economics has become increasingly diversified in the subjects properly pertaining to its functions. The current questions presented through correspondence have demanded an increasingly greater amount of time and study. Because of these widely varied inquiries it has been impossible to devote a continuous and uninterrupted effort to medical economic research. This situation is in some respects desirable and stimulating, since it constantly presents for consideration new problems and new phases of old problems from all sections of the United States, and it prevents a contraction of vision that might develop were attention directed wholly and continuously to the study of a single subject.

During 1932, research studies were conducted in the following phases of medical economics:

1. Contract practice.
2. Workmen's compensation.
3. Collection methods and agencies.
4. An outline on medical economics for use in medical colleges.
5. Group practice.
6. Group hospitalization.
7. Health and accident insurance practice.

CONTRACT PRACTICE

The study on contract practice, which was initiated shortly after the Bureau was established in March, 1931, has been continued in an effort to discover the variations in type of this practice and the extent to which it exists. The Bureau has a record of more than 430 organizations throughout the United States offering or furnishing medical services on a contract basis. As yet it has been impossible to make a complete estimate of the number of individuals involved in the system itself or the number of persons who receive their medical care under contract coverage. It is known, however, that contract practice is carried on by such organizations in thirty-seven states and in 123 different communities. There are thirty-eight additional organizations for which no state or city address is given, although most of this number are known to maintain contract medical service in several states and in a number of communities in each state in which they operate. The figures given here are not final or complete. It is doubtful whether the total number of contract practice organizations can ever be determined, except by the expenditure of an unwarranted amount of time and money. Even after such an exhaustive survey, the figures would be only momentarily accurate because of the almost continuous launching of new and the abandonment of old contract schemes.

It is believed that the study of contract practice should be continued not so much to accumulate the record of additional numbers of organizations practicing medicine in this way as to keep constantly in touch with changes in methods within the system and the extension of the system into new fields.

GROUP HOSPITALIZATION

Group hospitalization represents a phase of contract practice which is comparatively new and which has shown a most remarkable growth. This type of contract practice or limited health insurance had its inception in a hospital in a Southern city about three years ago. It is known that during the past two years, and chiefly during 1932, at least sixteen different organizations have adopted the contract method of selling hospital service to both individuals and groups.

Group hospitalization plans are now being operated in thirty-five states and the District of Columbia. More than 250 hospitals are either engaged in or are considering furnishing hospital care under some form of contract. This new phase of contract practice has been stimulated by the urgency of the present financial stress and is being vigorously promoted for profit by lay corporations and individuals, who are capitalizing to their own advantage the present hospital situation and the popular appeal for medical care at low rates. This situation, which utilizes a temporary expedient to profiteer by vending hospital services, demands the immediate and serious consideration of the entire medical profession. A description of group hospitalization and a criticism of its operation appeared in THE JOURNAL, Jan. 7, 14 and 21, 1933.

WORKMEN'S COMPENSATION

In following the course of European evolution, through the stages of common-law defense and liability insurance, the American compensation system came to emphasize legal and financial features to the almost total neglect of the medical side. Legislation and administration were determined largely by the conflict and cooperation of insurance companies, employers, social workers and laborers, whose influence in framing the laws was about in the order named.

During the years of formative legislation on liability insurance and workmen's compensation, physicians in the United States showed but little interest in the movement that, within a generation, was to be a dominating influence in the practice of a considerable percentage of them. The laws were concerned almost exclusively with securing the legal right of the injured worker in some sort of financial relief during the period his injury prevented him from working.

Today it is becoming evident that every phase of the administration of compensation rests for its success on the skill of physicians and surgeons. Even the prevention of accidents, it is now gradually being recognized, is dependent more on mental and physical examination, treatment and placement of employees than on mechanical safeguards, shop discipline and "safety first crusades." From the moment the accident occurs, medical care is all decisive. Medical judgment decides the extent of the injury and therefore the amount of the compensation, and the character of the medical care determines to a large extent the period of disability and finally the method and time for rehabilitation. Yet there is only one state in which the law provides for a physician in any official administrative capacity concerned with determining the policy of compensation administration.

The report prepared by this bureau on Medical Relations under Workmen's Compensation was submitted to several individuals qualified by experience to criticize the subject matter and is now ready for distribution.

COLLECTION AGENCIES AND METHODS

In 1931, letters requesting information concerning collection methods and rates were sent to nearly 3,100 collection agencies. No replies were returned from many of these agencies and the information from others indicated that they do not accept medical accounts for collection. At present the Bureau records show 1,080 collection agencies which devote their attention either entirely or in part to the collection of medical accounts. In April, 1932, a report was published in the A. M. A. BULLETIN which described several types of collection methods and cautioned the profession to be extremely careful in the selection of agencies to handle their accounts. Especially is it necessary for physicians to exercise caution in signing any collection agency contract. It is known that some collection agency contracts are entirely one-sided and vicious and may extort from the physician more money than it brings in. Furthermore, the methods used are sometimes so unfair, unethical, humiliating and almost illegal that the confidence, good will and respect of patients is destroyed with resulting loss of patients as well as money to the physician.

County medical societies in twenty-nine counties in widely separated sections of the United States have organized their own collection agencies and credit bureaus. The information concerning these medical society owned and operated collection bureaus is not yet complete and therefore a description of their organization, methods and experience must be reported later.

MEDICAL ECONOMICS INSTRUCTION IN MEDICAL COLLEGES

In April, 1932, an inquiry was directed to the deans of medical schools for information concerning the instruction given medical students on the subjects of medical economics, ethics and organization and the relations of the physician to his patients and to the public. Replies were received from sixty-two medical schools, of which thirty-seven had no courses

but were offering occasional lectures, and twenty-five were offering courses of a somewhat more formal nature.

Lectures on medical ethics are given in forty-eight of the sixty-two medical schools reporting. Of the medical schools having no formal courses, instruction on medical economics and organization was provided through occasional lectures in eight, and in sixteen of these schools occasional lectures were given on the relations of the physician with his patients and the public.

In those schools in which more formal instruction was given, fourteen provided lectures on medical economics, eleven had lectures on medical organizations, and fifteen had lectures on the physician's relationship with his patients and the public.

Although instruction on medical ethics and jurisprudence has for some time been accorded a regular place in the curriculum of most medical schools, it seems that, in many medical schools, instruction on medical economics, organization and public relations of physicians has not yet been accorded the place it deserves in the preparation of the medical student for his life work. Before adequate instruction on these subjects can be provided, it is necessary to have available not only an outline embodying the essential facts on the subjects but also instructors who are willing and prepared to present the subjects.

The Bureau of Medical Economics is preparing an outline on medical economics suitable for use in medical schools. It is proposed that at first such an outline be used in only a few medical schools to discover any changes that may be necessary in the subject matter. The use of such an outline should, of course, be an entirely voluntary matter and should not disarrange the basic courses of instruction. This suggestion is made with the firm belief that it is becoming increasingly necessary that persons about to enter the practice of medicine have at least a minimum of information concerning medical economics, ethics, organization and the relationship of the physician to his patients and to the public.

GROUP PRACTICE

Last year a schedule requesting information concerning group practice was sent to the secretaries of county medical societies. This year a second schedule was mailed to secure additional information on this phase of medical practice. These schedules are now being returned daily and will furnish data for a separate report. It is interesting to note, in passing, that 258 secretaries of county medical societies reported the existence of one or more medical groups in their jurisdictions; and of 227 who answered the question as to whether group practice reduces the cost of medical care to the patient, 167 replied in the negative and 60 in the affirmative.

HEALTH AND ACCIDENT INSURANCE PRACTICE

At the annual meeting of the International Claim Association, which closely followed the annual session of the American Medical Association in Philadelphia, a special committee was appointed to study claim proof practice and to work with the Bureau of Medical Economics in suggesting forms and practices mutually satisfactory to the insurance companies.

Mr. Robert K. Metcalf, chairman of the special committee and now vice president of the International Claim Association, circularized 233 insurance companies with membership in the International Claim Association, the Accident and Health Conference and the Bureau of Personal Accident and Health Underwriters.

The first step in the study consisted in assembling all the blanks used for similar claim proofs of these companies. A composite was then made of the questions on each of the sets of forms assembled. It was found that only a few of the questions were asked by all of the companies. In conference with Mr. Metcalf, these tabulations were studied carefully for possible combinations of questions which on some blanks were duplicated and elimination of other questions which had insufficient bearing on the proof of claim to warrant inclusion.

The chief object of this study was to produce a simplified and shortened form which would require a minimum of time and work to fill out and still furnish the insurance companies sufficient information on which to base a settlement. An effort was made to eliminate those questions which refer to the nature and extent of previous illnesses, since such information is not pertinent in most cases and in those instances in which this information may be necessary it should be made the subject of a special report, for which the insurance company should be willing to pay according to the amount of information or search required. Furthermore, an attempt was made to reduce to the minimum the questions calling for information pertaining to the nature of the accident or injury. To safeguard the physician giving information, it is suggested that the following statement be printed on the blank to be filled in and signed by the claimant: "I hereby authorize any physician who has examined or treated me or who may hereafter examine or treat me on account of the above described injuries or illness to furnish the Company with the information it may require for the equitable settlement of this claim." It is believed that this particular phase of the practice may need further study. It is possible that the physician should be further safeguarded by having a similar signed waiver to retain for his own files.

Several specimen forms of the suggested shortened blanks have been prepared for experimental use in different types of health and accident claims. A few companies have already placed the shortened forms in use experimentally, and a considerable number have signified their desire to cooperate fully in an endeavor to simplify and standardize, at least to some extent, the procedures in claim proof practice. It cannot be expected that all insurance companies will adopt new ideas in this field at once, but at the last meeting of the International Claim Association there was evident a sentiment in favor of standard simplified blanks, of eliminating from the regular claim proof blanks questions which require special time, search and professional opinion but which may not pertain strictly to the present condition, and of shifting from the physician to the claimant and the local claim agent the responsibility of furnishing all information not strictly pertaining to the physician.

It is almost certain that insurance companies will not agree to pay a stipulated fee for filling out a short health and accident claim proof blank. Many, if not most, companies are apparently willing to pay for additional information when necessary to effect a settlement. It would be helpful in effecting a further understanding with insurance companies if an authoritative expression of the American Medical Association might be had on this subject.

BUREAU SCHEDULES ON OTHER PHASES OF MEDICAL ECONOMICS

Bureau schedules on several phases of medical economics have been sent to 1,949 county medical society secretaries. At the time this report was written, 663 secretaries had completed and returned all the schedules sent them and 550 more secretaries had completed and returned several but not all of the schedules. This is an evidence of the interest in and splendid cooperation with the work of the Bureau of Medical Economics that has been shown by county medical societies throughout the United States.

FIELD INVESTIGATIONS

The director and his assistant made field investigations on medical economic subjects in thirteen states and the District of Columbia.

SPEAKING ENGAGEMENTS

Speaking engagements were filled in nineteen cities in fifteen states to more than 3,100 physicians, including some laymen.

PUBLICATIONS OF THE BUREAU

During the year, the Bureau of Medical Economics prepared a series of reports and bulletins dealing with various features of its work. Special mention should be given to those dealing with the incomes of physicians, with contract practice, with the collection of fees, with workmen's compensation, and particularly an extensive series dealing with new forms of medical practice. The unsettled economic conditions of the times have caused the launching of schemes in various parts of the country, most of them based on the methods of insurance or of group payment for medical service, these schemes varying in different parts of the country according to the plans of their promoters or to local conditions. The series of articles developed by the Bureau fully elucidates such schemes, giving both favorable and unfavorable aspects from the point of view of medical practice. It is planned to continue this series during the coming year.

OFFICE ROUTINE

During the year the Bureau received and answered an average of 460 letters each month. A large part of this correspondence dealt with three subjects; namely, insurance, contract practice and collection agencies and methods.

LOCAL STUDIES

With the increasing interest in medical economics shown by state and county medical societies in the appointment of medical economics committees, it is probable that many county medical societies will soon endeavor to conduct their own investigations of medical economic problems. It is desirable that county medical societies become thoroughly acquainted with the problems in their own jurisdictions. In order that this bureau may be constantly informed of medical economic conditions throughout the United States, it is hoped that county and state medical societies will furnish it with copies of all studies and recommendations made. It is believed that the results of such investigations might be more easily comparable if certain features of the studies were made in a somewhat uniform manner. It is recognized that the complete study on a given subject in one community might require a more comprehensive form than in another, but at least certain basic information might be collected on uniform blanks.

OTHER INVESTIGATIONS

Complying with instructions of the House of Delegates, the director has recently visited the city of Havana for the purpose of studying the operation of health and insurance societies in that city. A report will be submitted for the House of Delegates.

The Bureau is proceeding with studies on sickness insurance in European countries and will prepare a report as soon as possible.

Bureau of Legal Medicine and Legislation

The Bureau of Legal Medicine and Legislation has been active in affording assistance to state and county medical associations with reference to legislative and legal problems and, within such limits as legal ethics and the resources of the Bureau permitted, to individual Fellows and members, and to subscribers to THE JOURNAL, with reference to problems submitted by them. Reciprocally, the several state associations, many county associations and individual Fellows and members have cooperated to a greater extent than ever before in the efforts of the Association to limit national legislation of interest to the medical profession to such as is sound and just and in the best interests of the people at large. To all associations and persons who have cooperated in that manner, the thanks of the Association are due.

FEDERAL LEGISLATIVE ACTIVITIES

The first session of the Seventy-Second Congress continued from Dec. 7, 1931, to July 16, 1932. The second session convened Dec. 5, 1932, and expired March 4, 1933. The Seventy-Third Congress met in special session March 9 and is still in session as this report is being written. A general outline of congressional activities of interest to the medical profession is stated below.

Government Competition in the Practice of Medicine.—The House of Representatives, May 31, 1932, authorized the appointment of a committee to investigate government competition with private enterprise. On behalf of the Association, the director of the Bureau of Legal Medicine and Legislation appeared before the committee and pointed out the extent to which the treatment of veterans for non-service-connected injuries constitutes an unwarranted invasion by the government of the field of medical practice. Similar representations had been made previously by several state medical associations.

World War Veterans' Legislation.—On April 25, 1932, a special committee appointed by the House of Representatives reported a bill to effect economies in the administration of the affairs of the federal government. The bill as reported materially limited the right of veterans to free hospitalization and medical and surgical service for disabilities not arising out of military service. Such limitations, however, were stricken from the bill by the House, which substituted a section providing for a joint congressional committee to investigate the operation of the laws and regulations relating to the relief of veterans. The bill as thus amended became a law. Your President and the director of the Bureau of Legal Medicine and Legislation appeared before the joint committee on behalf of the Association. The committee has made no report.

On March 20, the President approved a bill passed by the Seventy-Third Congress (H. R. 2820), repealing, with certain exceptions, all public laws granting compensation and medical and hospital treatment to veterans and authorizing the President to provide by regulation certain benefits for veterans. These regulations, promulgated March 31, authorize hospital and domiciliary care and medical services for veterans suffering from service-connected disabilities. A veteran suffering from non-service disabilities can obtain hospital or domiciliary care, at public expense, only in case he served for a period of ninety days or more, is suffering from a permanent disability, or tuberculosis or a neuropsychiatric ailment, which incapacitates him from earning a living, and has no adequate means of support.

Federal Subsidies for State Health Activities.—Since 1916, an appropriation has been made annually for the Public Health Service, for special studies of and demonstration work in rural sanitation, in states willing and able to pay a part of the cost. This annual appropriation has been gradually increased from $25,000 in the fiscal year 1916 to $338,000 in the fiscal year 1932. In 1932, proponents of the federal subsidy system made a serious but unsuccessful effort to have the amount increased to $3,000,000. The bills proposing such an increase, along with other federal subsidy bills, died with the expiration of the Seventy-Second Congress.

Medical Units in the Reserve Officers' Training Corps.—At the session of the House of Delegates last year, a resolution was adopted protesting against a then threatened reduction in the number of medical officers in the Army. Telegrams were sent to the President, the Speaker of the House of Representatives, and the Secretary of War, to make that protest effective. Subsequently the director of your Bureau of Legal Medicine and Legislation appeared before the subcommittee of the Senate Committee on Appropriations having the War Department Appropriation bill for the fiscal year 1933 under consideration and urged that the proposed reduction in the number of officers in the Medical Department be not made and that medical units in the Reserve Officers' Training Corps be continued. The number of officers was continued at its then existing level, but the bill as enacted discontinued the training of physicians, dentists and veterinarians in the Reserve Officers' Training Corps, except those who were members of such corps on May 5, 1932. The War Department appropriation bill for the fiscal year 1934 passed the House containing identical phraseology with respect to the discontinuance of the training of physicians, dentists and veterinarians in the Reserve Officers' Training Corps. The director of your Bureau of Legal Medicine and Legislation again protested against this discrimination and the Senate Committee on Appropriations eliminated the discriminatory provision from the bill. When the bill went to conference, however, the original House provision was reinserted and the bill passed in that form.

Flight Surgeons in the Navy.—Efforts were made by the Bureau of Legal Medicine and Legislation to bring about the discontinuance of the discriminatory legislation that prevented officers in the Bureau of Medicine and Surgery in the Navy Department, assigned to aerial flight duty, from being given the extra pay for such service allowable to officers in other branches of the naval service assigned to similar duty. The Senate committee having in charge the Navy Department bill for 1934 recommended the elimination of the discrimination and the Senate adopted the recommendation of the committee. When the bill went to conference, the reinsertion of the discriminatory provision, in a slightly modified form, was agreed on, and the bill passed as agreed to by the conference.

Medicinal Liquor. — Representatives of the Association appeared before a subcommittee of the House of Representatives Committee on the Judiciary, April 6, 1932, and before a subcommittee of the Senate Committee on the Judiciary on the following day, in support of the legislation proposed on behalf of the Association looking toward the rationalization of the provisions of the National Prohibition Act relating to medicinal liquor. The bill sponsored by the Association passed the House, but Senate action could not be obtained and the bill died

with the expiration of the Seventy-Second Congress. It was reintroduced in the Seventy-Third Congress, passed the Senate, March 29, and the House, March 30, and was approved by the President, March 31. The act abolishes the arbitrary quantitative limits on the amount of liquor a patient may receive and on the number of prescriptions a physician may write. It provides, however, that "no more liquor shall be prescribed to any person than is necessary to supply his medicinal needs." Under the act, no physician may be called on to file in the Department of Justice or the Department of the Treasury or in any other office of the government any statement of the ailment from which his patient is suffering or to keep his records in such a way as to lead to the disclosure of that ailment, except as may be necessary in the course of the execution and enforcement of the act or in other judicial process. Persons who by misrepresentations induce physicians to prescribe liquor not necessary for medicinal use are liable to fine and imprisonment.

The new law directs the discontinuance, not earlier than Jan. 1, 1934, of the use of official prescription blanks for prescribing liquor. The date when their use is to be discontinued will be announced later. After that date a physician will write prescriptions for liquor on his own prescription blanks, validating them by affixing and canceling special stamps, to be supplied by the Commissioner of Prohibition for that purpose.

While the arbitrary quantitative limits on the amount of liquor that a patient may receive and on the number of prescriptions that a physician may issue were abolished by the recent act, the Attorney General and the Secretary of the Treasury were authorized to prescribe jointly regulations relating to prescriptions for liquor for medicinal purposes and the quantities of spirituous and vinous liquor that may be prescribed for such purposes. Such regulations have been promulgated and are doubtless familiar to all members of the medical profession. They give a broad discretion to the medical profession with respect to prescribing. It remains now for the profession to justify that course, not only in order that the good name of the profession may be upheld but also to avoid the necessity of the modification of the regulations toward more rigid control.

STATE LEGISLATIVE ACTIVITIES

There was relatively little activity among state legislatures in 1932, since the legislatures of only nine states met in regular sessions and no legislature at a special session considered matters of specifically medical interest. The relative inactivity of 1932 has already been fully offset, however, during the current year, when forty-four legislatures have already met in regular sessions and two in special sessions. Some of the most important legislation enacted is described below. The report is only fragmentary with regard to bills enacted in 1933, for some legislatures are at the present writing (April 18) still in session and others have adjourned so recently that full reports of their proceedings are not available.

Practice of the Healing Art.—In Louisiana a bill was enacted defining osteopathy as "the treatment of disease, infirmity, deformity, defect, ailment or injury of a human being, without the use of drugs or medicines, except antiseptics and anodynes, by manipulations applied to the nerve centers, bones, muscles, or ligaments." This is in accord with the pretensions of the osteopathic cult on which it has been built up. More in harmony with present aspirations of practicing osteopaths, however, is the bill enacted in North Dakota, which defines osteopathy as "the art and science of applied therapy as heretofore or hereafter taught by recognized colleges of osteopathy except major surgery." The North Dakota legislation is clearly an attempt on the part of the North Dakota legislature to delegate to "recognized colleges of osteopathy" the right to change the scope of the osteopathic act from time to time, by the simple expedient of changing their curriculums, an attempted delegation of legislative authority obnoxious to the ordinary principles of legislation. In Arizona, chiropractors made a determined effort, by the initiative, to procure all the rights and privileges of nonsectarian practitioners, but fortunately the movement was defeated at the polls. The Arizona legislature, however, enacted a law exempting from the operation of the medical practice act "the practice of religion or treatment by prayer." Basic science laws were enacted in Arizona and Oregon. In Louisiana and Mississippi, bills levying occupational taxes on physicians were enacted.

Hospitals.—In Rhode Island, a law was passed requiring all hospitals except state institutions and maternity hospitals to be licensed annually by the state public health commissioner. A new Louisiana law makes admissible in evidence certified copies of charts or records of charity hospitals. New Jersey made it a misdemeanor for any person to obtain treatment from any governmental or charitable hospital, free or at reduced rates, through false representations as to financial condition. In Maine, a bill was enacted requiring all hospitals receiving state aid to permit licensed osteopaths to practice therein, in the discretion of their boards of trustees. In North Dakota, the new osteopathic practice act purports to permit osteopaths to practice in all institutions maintained wholly or in part by public funds. In Kentucky, a bill was passed authorizing the board of charities and corrections to employ chiropractors to treat patients in state, charitable and penal institutions.

Medical Liens.—Arkansas, Indiana, Texas and Virginia enacted laws authorizing liens for services to persons injured through the fault or neglect of other persons, on moneys received by the injured persons by reason of their injuries. The Arkansas law authorizes such liens for the services of physicians, nurses and hospitals and is substantially in the form of the model act prepared by the Bureau of Legal Medicine and Legislation, to which reference is made hereafter. The Indiana and Virginia laws authorize such liens only for hospitals. Bills authorizing liens have passed both houses of the legislature in Iowa and Minnesota and at present writing are awaiting action by the governor. In North Dakota, a bill of this character passed both houses of the legislature but was vetoed by the governor.

Narcotic Legislation.—The proposed uniform state narcotic drug act, to which reference is made later, formulated by the National Conference of Commissioners on Uniform State Laws and approved by the American Bar Association, in October, 1932, has been considered by a number of state legislatures. At the present writing it has been enacted, with slight modifications, by Indiana and Nevada. It has passed both houses of the legislature in New York and is awaiting action by the governor. The narcotic act of Rhode Island was extensively amended so as to provide for the voluntary commitment of narcotic drug addicts for not less than one year, the suspension of the licenses of physicians addicted to the use of narcotic drugs, and the revocation of the licenses of physicians and nurses convicted of violating the state or the federal narcotic acts. In Delaware, Louisiana and Oklahoma, laws were passed regulating the production and distribution of preparations and derivatives of the several varieties of cannabis and of "mariahuana," a name identified with certain preparations of cannabis. A recently enacted Idaho law limits the possession, sale or distribution of anahalonium, otherwise known as peyote. Maine prohibited the sale or other distribution of barbital, except on the written prescription of a licensed physician, dentist or veterinarian. In Virginia, the law regulating the sale of hypnotic drugs was amended so as to exclude from its operation sulphonal, trional, tetronal and chloral hydrate, thus leaving the law applicable to barbital alone.

Expert Testimony.—In Louisiana a law was passed authorizing the court in any criminal case, when it has reason to believe that the defendant is insane or mentally defective, to appoint two disinterested, qualified experts to examine him and to testify at a hearing as to his mental condition.

Laboratories.—New York enacted a law requiring the annual registration with the state department of health of all laboratories or other places handling or cultivating live pathogenic germs, and regulating the distribution and sale of such germs.

Animal Experimentation.—Although bills prohibiting or limiting animal experimentation were before the legislatures of several states and before Congress, in no case was such a bill enacted.

UNIFORM STATE LAWS

Uniform State Narcotic Drug Act.—There are certain obvious advantages in uniformity of state legislation, when that uniformity is based on adequate study and experience. Uniformity facilitates an understanding of the law by the people who must live under it. It promotes efficiency and economy

of administration, by making the experience of every state available to every other state. It tends to diminish litigation, since decisions in one state will be widely followed in other states, even though not of binding authority. In those fields of legislation, therefore, in which there is an adequate background of knowledge and experience, it seems well for the Association to support uniform legislation.

Within the description outlined is the proposed uniform state narcotic drug act, formulated by the Conference of Commissioners on Uniform State Laws. The draft of this law as approved by the conference may be said to have had its origin in the work of a committee authorized by the House of Delegates in 1919. The draft can certainly be said to be, therefore, the product of much study and ripe experience. In preparing the draft, the Conference of Commissioners on Uniform State Laws has had the active cooperation of the Bureau of Legal Medicine and Legislation and has been in touch with representatives of various other professional, commercial and official groups and agencies interested in the subject-matter. It has the approval of the American Bar Association and of the federal Bureau of Narcotics. Although adopted officially only as recently as last October, the model act has been enacted by Indiana and Nevada and has passed both houses of the legislature of New York. A copy of the proposed uniform state narcotic drug act was published in the AMERICAN MEDICAL ASSOCIATION BULLETIN in January, 1933. To facilitate consideration, a copy of the draft will be placed in the hands of each delegate.

Efficient state narcotic drug control must supplement federal narcotic drug control, if the abuse of narcotic drugs is to be prevented. The impotence of federal activities with respect to a matter of this character, when they are not supplemented by effective state cooperation, has been forcibly demonstrated by experience under the Eighteenth Amendment and the national prohibition act. The authority assumed by the federal government with respect to the intrastate control of narcotic drugs is based on the federal taxing power. Although the regulations made under the federal narcotic act concerning the intrastate production, manufacture, distribution, and use of narcotic drugs have been very generally affirmed by the courts, they have been affirmed solely because of some supposed relation that the courts have been able to discover between those regulations and the collection of the federal tax. How much further the courts will go in sanctioning such regulations is uncertain. If the efforts of the federal government, under the cover of its taxing authority, to control intrastate matters of this kind be negatived by court action, the government, if state control be inadequate, may attempt to take over altogether the production, manufacture, distribution, and use of narcotic drugs in the several states, under its treaty making power. If the federal government should do this, the states would lose their right to authorize practitioners of medicine to prescribe or administer narcotic drugs covered by the act, and the practice of medicine, to the extent that it calls for the professional use of narcotic drugs, would be governed by a Washington bureau. This certainly is a situation that should be avoided if possible, and it can best be avoided by effective state legislation now.

To the plea that a state can save money by shutting its eyes to the prevalence of narcotic addiction and the abuse of narcotic drugs within its borders, and by leaving the entire matter to federal control, the answer is that the saving is only apparent. It costs the federal government as much, and probably even more, to enforce its narcotic laws within a state than it would cost the state to enforce similar laws of its own. The people of the state pay through federal taxes for the enforcement of the federal law, when they might better and more economically, through their state taxes, enforce a state law. Reliance on exclusively federal activities for intrastate protection against the abuse of narcotic drugs is simply the acceptance of a form of federal subsidy and control, with all the inequities and danger inherent in the subsidy system.

For the reasons stated, the Board of Trustees believes the enactment and enforcement of proper narcotic legislation by each of the several states should be urged.

Medical Lien Laws.—In a field quite different from that of the proposed uniform state narcotic drug act is the suggested medical lien act. The first medical lien act was that passed by Nebraska in 1915. After its enactment, similar acts were adopted by New Jersey, Montana, Oregon, and Delaware. Most of these acts seemed inadequate to accomplish the purposes for which they were intended. The Bureau of Legal Medicine and Legislation, therefore, undertook to prepare a draft of a model medical lien act for the use of such states as might be interested in legislation of this character. Copies of the proposed act have been widely distributed and have generally been favorably commented on. It is necessarily filled with detail, which presumably may have to be modified to meet the needs of individual states. It has already been enacted in Arkansas. It is recommended that the House of Delegates approve the draft of this act prepared by the Bureau of Legal Medicine and Legislation, as a guide for states interested in legislation of this character.

PUBLICATION OF MEDICOLEGAL CASES

Medicolegal Cases: Abstracts of Court Decisions, a volume of approximately 1,300 pages, was published in November, 1932. This book contains, it is believed, an abstract of every published decision of substantial medicolegal interest rendered by federal and state courts of last resort and by some of the more important intermediate appellate courts, during the five-year period beginning about March, 1925. It comprises all abstracts published in THE JOURNAL during the calendar years 1926-1930, inclusive. To physicians and to the public generally the book is being sold for $7. It has been made available to the several constituent associations at the cost of publication, $5, as directed by the House of Delegates.

Bureau of Health and Public Instruction

RETIREMENT OF DR. JOHN M. DODSON

Dr. John M. Dodson, who served the Association for eight years as director of the Bureau of Health and Public Instruction, retired because of ill health on March 1, 1932, and was succeeded as director by Dr. W. W. Bauer.

REORGANIZATION

During the year a rather complete reorganization of office methods was accomplished, including the extension of a source file which will eventually become as complete as possible. This file is in constant use as the source of information used in the routine work of the Bureau. A complete rearrangement of the Question and Answer file has been effected in order that the large amount of correspondence passing through this particular department of the Bureau may be answered promptly and to the best possible advantage.

GENERAL ACTIVITIES

The cooperation of the Bureau with the editorial department of HYGEIA has been continued, and several articles have been provided through the Bureau for publication in HYGEIA.

Through the Question and Answer department of the Bureau, approximately 300 inquiries a month have been received and answered. There has been a marked change within recent years in the character of inquiries received, in that while formerly many inquiries had to do with cancer, heart disease, nephritis and apoplexy, the number of questions concerning these subjects has become comparatively small. Many inquirers formerly asked for information about the care and feeding of infants, whereas today dietary questions of interest to adults are considerably more numerous than those concerned with infants' care and feeding.

Clippings and reprints from HYGEIA have been used extensively in replying to questions submitted, especially those received from students, teachers and members of lay organizations who wish to have information to be used in the preparation of papers for presentation at the meetings of such organizations.

RADIO BROADCASTING

The program of broadcasting over the Columbia System was discontinued in June, 1932. During the year, 121 five minute and 50 fifteen minute radio talks were broadcast, the fifteen minute talks being given over Station WBBM. Some of the talks were adapted from or based on material published in THE JOURNAL, HYGEIA and other periodicals, while others were prepared by the Bureau. A large number of radio talks delivered in connection with the programs of component county medical societies and constituent state medical associations

were procured by the Bureau with permission for their use, and the radio program of the Association has also been enriched by contributions from other bureaus and councils. Material for 166 radio talks was mimeographed and is now included in the radio library of the Bureau and made available for the use of medical societies.

Information concerning the broadcasting activities of component county medical societies and constituent state medical associations is not complete, but it appears that approximately 140 component and constituent societies have radio programs. Thirteen state medical associations and fifty-one county medical societies asked for and received material suitable for broadcasting during the year. The total number of talks distributed was 4,312, and distribution was made only on specific request. The subjects dealt with covered a wide range, including periodic health examinations, communicable diseases, diet, cancer, mental hygiene, child training, medical history, tuberculosis and many other important questions.

BUREAU PUBLICATIONS

There was a comparatively large decrease in the demand for the pamphlets, leaflets and other publications heretofore distributed by the Bureau in large numbers. This was undoubtedly due to the effects of the general financial depression. Distribution was also curtailed to some extent because of the limitation of production of new publications. A number of leaflets and pamphlets heretofore widely distributed have been discontinued because they have become in part or altogether obsolete. Some of the more important of these publications have been replaced with new pamphlets and leaflets in which the information presented has been brought up to date. An entirely new series of pamphlets dealing with sex questions has been prepared for the Bureau by Dr. Thurman B. Rice, assistant professor of biology at the Indiana University School of Medicine.

COOPERATION WITH OTHER AGENCIES

The director of the Bureau has continued to serve as a member of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. The activities of this committee have been somewhat curtailed because of a reduction in the funds heretofore available for prosecuting its work. The Committee on Mental Hygiene of the American Medical Association rendered most valuable assistance in the consideration of an important report on mental hygiene that had been submitted to the Joint Committee. An entirely new report which is now being compiled will also be submitted to the Committee on Mental Hygiene. A report on the inspection of school children by nonmedical personnel is now nearing completion, and studies on other important subjects are now in contemplation.

The Bureau has maintained close touch with the Committee for the Protection of Medical Research and has endeavored to render assistance in the prosecution of the work of this important committee. A new edition of the pamphlet entitled "The Dog's Gift to the Relief of Human Suffering" has been issued under the editorship of Dr. Walter B. Cannon and Dr. Cecil K. Drinker. This first appeared in the *New England Journal of Medicine* and was reprinted with the permission of the editor of that journal. This pamphlet, together with the pamphlet entitled "The Ethics of Animal Experimentation," has been distributed as in previous years among the senior students of medical schools whose deans have agreed to make the distribution.

Cordial cooperation has been maintained with the National Congress of Parents and Teachers. The Association, with the approval of the Board of Trustees, has continued its annual donation of physical examination blanks in a number equal to the number of blanks purchased by the National Congress of Parents and Teachers. In general, the relationship between the American Medical Association and the parents and teachers organization appears to have been satisfactory, and distinct progress has been made toward the objectives of the Summer Round-Up; namely, to encourage the performance of preschool examinations by family physicians.

PUBLIC ADDRESSES

The director of the Bureau delivered sixteen public addresses during the year at meetings attended by from 35 to 2,000 persons. The director has also attended important meetings of various official groups concerned with public health and has participated in conferences held under the auspices of professional and lay organizations interested in that field.

Bureau of Investigation

The work of this bureau has continued along the lines heretofore followed and there has been no decrease in the demands for its services. During the year, approximately one thousand direct inquiries were received by mail each month and such information as was available was forwarded to all inquirers. These inquiries came from officers and members of medical societies, from laymen, from the officers of civic organizations, from government officials and from other sources. The Bureau has continued its cooperation with groups organized to combat fraud in advertising and has provided much information for newspapers and magazines that make an effort to keep their advertising columns free from fraudulent and misleading advertising material. Much information has also been furnished to teachers and pupils in schools and colleges concerning "patent medicines" and medical frauds.

The required material for the department of THE JOURNAL under the heading "Bureau of Investigation" has been prepared by the Bureau. Many of the articles that have appeared in THE JOURNAL have been reprinted and have been distributed along with pamphlets, leaflets and other publications which have been supplied by this bureau for many years. The preparation of replies to inquiries and of material for publication in THE JOURNAL has represented much individual investigation by the Bureau's personnel and has involved a large amount of time and care.

During the year, the director of the Bureau delivered thirty addresses in six states, all of them before public audiences.

There has been the usual demand for the various pamphlets on "patent medicines" and quackery prepared and published by the Bureau as well as for the posters and lantern slides, which have been made easily available to county medical societies.

Bureau of Exhibits

THE ANNUAL SCIENTIFIC EXHIBIT

A decided factor in the success of the Scientific Exhibit at the New Orleans session was the interest taken by the sections of the Scientific Assembly under whose auspices exhibits were installed and demonstrated. Twelve sections were represented by official committees, under whose direction exhibits representing the most recent advances in the various special fields of medicine were made. Forty-three of the papers read before the sections of the Scientific Assembly were illustrated in the Scientific Exhibit. An added feature at the New Orleans session was a motion picture program, sponsored by five of the scientific sections, which included more than fifty motion pictures. There were three special exhibits on poliomyelitis, cancer and physical therapy. These exhibits were made possible through the assistance of special committees, whose members made most generous contributions in time and effort. Members of these committees and a number of other splendidly qualified physicians served as demonstrators and the exhibits were thus made to have great educational value.

Because of the diversified nature of material shown and because of the high quality of the exhibits in general, the task of the Committee on Awards was a most difficult one.

The hall in which the Scientific Exhibit was housed at New Orleans was somewhat smaller than usual, so that it was necessary to limit the number of exhibits to 120.

EDUCATIONAL EXHIBITS

More applications for the loan of exhibits of an educational nature were received during 1932 than in any previous year. Many requests for exhibit material could not be complied with because of the cost involved in preparing and transporting the kind of material requested. Unfortunately, because a great many medical meetings are held within a short period in the spring or in the fall, it was not possible to meet all the demands that were made on the Bureau for exhibit material to be used at such meetings.

Forty-three exhibits were lent during the year, seventeen of which were of a strictly scientific nature. Twenty-six of the exhibits were provided for schools, colleges, parent-teacher

associations, health departments and organizations of various kinds. In every instance, these exhibits were shown under the auspices of medical societies or the endorsement of requests for exhibit material was secured from such societies before the exhibits were shown.

EXHIBIT AT CENTURY OF PROGRESS

The Bureau has been engaged in the preparation of exhibits that will be installed in the Hall of Science at the Century of Progress International Exposition, to be held in Chicago during the current year. These exhibits will be mainly historical in character, four general subjects to be emphasized being Progress in Medical Practice, Progress in Medical Care, Progress in Medical Education, and Progress in Health Education.

Committee on Foods

The Committee on Foods is just completing its third year. Its influence, work and accomplishments differ from those of any other food investigative body. The requirements of the Committee are broader than those of food statutes and other food investigative organizations. The activities and influence of the American Medical Association, expressed through the Committee on Foods, together exert a powerful influence for controlling foods and food advertising in the interests of the public.

The Committee was delegated to utilize the influence of the American Medical Association for the promotion of wholesome foods of desired nutritional values, and for the encouragement of truthful and instructive food advertising. This basic conception has guided the Committee in the formulation of its Rules and Regulations, the development of its policies, the rendition of its decisions and the acceptance of foods.

The Committee has used its influence predominantly to support manufacturers who wished authoritative specialized guidance and who were willing voluntarily to follow a leadership which they recognize as scientifically authoritative.

Food advertising apart from the container label is without the jurisdiction of food statutes. There was no organized effective restraining force to discourage false advertising before the creation of the Committee. The most effective control originates with and is exercised by the controlled themselves. The Committee offers a system of self control by which the food industry from within itself will be governed only by established knowledge, the welfare of the industry itself and the consciousness and recognition of public welfare.

The Committee aids food manufacturers who are dedicated to sound business policies by granting the privilege of using the Committee seal on their products, provided their advertising complies with the Committee's requirements. The seal gives authenticity and trustworthiness to accepted advertising not possessed by unaccepted competitive advertising.

ACCOMPLISHMENTS OF THE COMMITTEE

Some of the concrete accomplishments of the Committee during the year follow:

Report of Committee's Actions

Total products accepted	876
Products accepted during 1932	510
Total products rejected	21
Products rejected during 1932	16
Total products submitted	1,500
Products submitted during 1932	631
Published announcements of acceptance during 1932	252
Withdrawals of acceptance during 1932	16

Rules and Regulations.—The fourth revised edition of the Committee's Rules and Regulations has been published; 3,500 copies of these rules were distributed during the year to the food industry, advertising agencies, institutions, physicians and others. No other body or institution has ever issued a set of rules or statements on foods even bearing a resemblance to these rules of the Committee.

Four amendments were made to the rules. The two amendments governing the package label and advertising require that "the common name of a food or a descriptive statement of the identity of its ingredients, arranged in the order of their decreasing proportions by weight in the food, and in easily legible type, must appear in proximity to the trade name on the label and in advertising if such be deemed in the interest and welfare of the public or physicians, or necessary to avoid improper or unethical merchandising practices"; and that "names of diseases shall not be used on the package label or in advertising addressed to the public except in statements regarding nutritional disorders arising from inadequacy of the diet in nutritional essentials." The first amendment is necessary to prevent deception in statements of identification of foods by giving undue prominence to ingredients present in small proportions, and more than to those present in major proportions; the second is intended to permit the mention of nutritional disorders as differentiated from names of diseases in lay advertising.

The Committee is requiring that foods be designated by their common names or that identifying descriptive statements accompany fanciful or brand names of food articles. Nondescriptive brand names for foods are objectionable because of their misuse; they open the way to grossly deceptive and misleading advertising; they permit the advertiser to make gross exaggerations and false statements without detection by the uninformed public. These fanciful names shroud foods in a cloak of mystery. Astounding properties are attributed to these foods by the advertising artist. A descriptive statement identifying the nature of a food accompanying the trade name on the package and in the advertising does not permit deceptive advertising fiction. This requirement is a powerful influence for truth in advertising.

It is generally recognized that disease names and discussion of diseases in public advertising lead to self medication and grossly deceptive, false and morbid advertising. The government already forbids all such terms and statements on food containers. There are no laws, however, for effectively preventing such advertising apart from food labels. The rule of the Committee does not permit disease names but does permit reference to nutrition. The Committee thereby permits the nutritional instruction of the public but opposes morbid advertising.

Experience is showing that the Rules and Regulations of the Committee are efficiently serving their intended purpose in practice of instructing and familiarizing the industry in the fundamentals of good food advertising. They are serving as a guide in the preparation of new foods for the market, of new food labels and of new advertising.

General Committee Decisions.—The Committee is supplementing its Rules and Regulations by a series of General Committee Decisions, thirty of which have been adopted to date, nineteen being adopted during 1932. These Decisions have been published in booklet form, 3,000 copies having been distributed during the year. The titles of the nineteen Decisions adopted during 1932 were:

Academic Titles "Doctor" and "M.D." as Integral Parts of Names of Foods.
Ambiguous and Incorrect Use of the Terms "Adequate" in Food Advertising.
Analytic Statements on Labels and in Advertising.
Constipation Statements in Lay Advertising for Roughage Foods and Bran.
Feeding Formulas for Infants in Lay Advertising.
Food Advertising Claims with Scientific or Technical Significance.
Iodized Salt and Goiter an Iodine Deficiency Disease.
Misleading Vague Claims Such as "Recommended by Physicians, Medical and Health Authorities, Nurses, Dietitians, Hospitals and Sanatoriums" and Equivalent Statements for Specific Foods.
Questionnaire Advertising.
"Sleep Inducing" Claims for Specific Foods.
So-Called Special "Diabetic Foods" or Special Foods for Sugar and Carbohydrate Restricted Diets.
Superlative and Comparative Claims.
Uses of Terms "Sterile," "Sterilized" and "Sterilization."
Vague Mineral Claims.
Vague Use of Terms "Balanced" or "Scientifically Balanced."
Vitamin and Mineral Content of Dried Vegetables.
Vitamin Claims in Food Advertising.
Vitamin Fortification of Foods.
Whole Wheat and Graham Foods.

The individual decisions define the Committee's opinion on nutritional and food issues of public import, on specific types of permissible and unpermissible advertising claims and names of foods, and on the proper and improper use of certain terms and phrases; they define the Committee's requirements for the declaration of certain ingredients in specific foods; they define the required nutritional values and composition of certain classes of prepared foods. These decisions exemplify and illustrate the

practical and explicit application of the Rules and Regulations to specific foods, to specific advertising statements and to specific food problems.

These General Committee Decisions are being augmented as the work of the Committee progresses. They give exactness, permanence and continuity to the Committee's judgments and work; they are proposed for the explicit guidance and instruction of the food industry and advertising agencies.

Accepted and Rejected Foods.—The Committee on Foods is accepting foods of local as well as of national distribution. It does not distinguish between small and big manufacturers. Merit and truth are the deciding factors of acceptance and they only are recognized by the Committee.

The acceptance of foods in practically all cases follows more or less drastic changes in the labels and advertising. It is exceptional for a product to be accepted as submitted. In a large proportion of instances the labels and advertising are completely reconstructed. New trade names are adopted for some foods. Manufacturing formulas of foods are being modified to satisfy the Committee's recommendations. The industry appears willing to comply with the requirements. It is worthy of mention that submitted products bearing other seals are often accompanied by the most flagrantly false and deceptive advertising.

Subsequent to considering foods, the Committee gives reasons for its decisions and recommendations, proposes means to meet its requirements, and the Committee's office discusses the Committee's findings and recommendations with the manufacturers that they may thoroughly understand the Committee's requirements and act intelligently and properly thereon. This is part of the Committee's constructive and educational program. This procedure establishes confidence in the Committee and gains the sympathetic support and good will of manufacturers.

Frequently manufacturers address letters of appreciation to the Committee after they have been put to the trouble and expense of altering labels and discarding advertising; they often acknowledge that the revised new labels and advertising, in addition to being correct and more appropriate, are improvements over the old labels and advertising for sales reasons.

The Committee, an Adviser and Counselor, and a Clearing House on Food Subjects.—The office of the Committee, apart from its regular work of transacting Committee business, is being called on constantly for counsel on matters and problems pertaining to food manufacture, food advertising, food values and general food and nutritional subjects, many of which are of vital public interest. These requests come from physicians, food manufacturers, advertising agencies, trade organizations, institutions, hospitals, government departments, commercial laboratories, and individuals of every description. Radio talks on the work of the Committee and on good and bad food advertising are broadcast monthly.

Manufacturers planning new foods seek advice on the Committee's views and requirements before investing in expensive research and manufacturing developments. Advertising agencies call for information on possible claims for unsubmitted foods. Physicians, dietitians and nurses ask for information on special food and feeding problems. Four important trade associations are cooperating with the Committee and maintaining their advertising within its requirements. A fifth association is now reconstructing its entire advertising after the first submission was rejected. Some of the state departments of health call for expression of opinion on food problems involving public health.

Journal Announcements of Acceptance and the Book "Accepted Foods."—The Committee publishes announcements of its accepted foods in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. These announcements provide information on their composition, manufacture, chemical analysis, microorganism content, special food values and vitamin content and include prominent warranted claims. The information of these published statements enables the appraisal of the respective foods and advertising by the industry and by the public. With this publicly available information, incompatible claims become self evident. The announcements are effective and important in the Committee's scheme of self regulation and self control by the industry itself in matters of food advertising and food merchandizing.

The book "Accepted Foods" is an important feature of the developing program of the Committee. It contains a report on all foods accepted or rejected by the Committee, provides information on accepted foods and reasons for the action taken on rejected foods, proposes both to the advertiser and to the public standards for food values and proper advertising, and demonstrates the desirability that such standards be adopted by some competent, unbiased authority. Sooner or later all food claims in advertising and food values will be judged by these standards. The courage of the Committee in accepting this responsibility and its willingness to accept the immense amount of work that this entails deserve recognition and gratitude from both the public and the medical profession.

Miscellaneous.—During the year the Council on Pharmacy and Chemistry transferred a class of foods known as "medicinal foods" to the Committee. These foods, especially intended for the nutrition of the sick, are considered to fall more appropriately within the scope of the Committee.

At the request of the Committee, the manufacturer of a nationally distributed food removed a nonfood ingredient, soap, from the manufacturing formula. Several manufacturers of iodized salt have increased the iodine content to that required by the Committee. A large manufacturer of apple cider has taken steps to remove toxic arsenic spray material from the apples before they are pressed, to protect the public health.

Resolutions from Constituent State Medical Associations

The following resolution, adopted by the Board of Trustees of the Medical Society of the State of Pennsylvania, has been transmitted to this Board:

WHEREAS, There have been formed important national organizations of physicians, specialists, other than the American Medical Association, and

WHEREAS, Such organizations fundamentally formed for scientific purposes have from time to time publicly expressed opinions concerning the entire practice of medicine, especially in its social and economic relationships, and

WHEREAS, An unusual emphasis on the social and economic position of medical practice has recently been precipitated by the published report of the national committee known as the Committee on the Costs of Medical Care. Be it

Resolved, That, in the interest of the welfare of the public and the maintenance of the most serviceable form of medical practice, the proper representatives of the American Medical Association request other national medical organizations whose qualifications for membership include membership in the American Medical Association to declare publicly their opinions on general social, legislative, and economic relationships of medical practice only through approved channels of the American Medical Association. To this end the Board of Trustees of the Medical Society of the State of Pennsylvania pledges its own efforts and influences to bring about this most desirable point of view in the minds of the members of the Medical Society of the State of Pennsylvania, who are also members or Fellows of the other organizations referred to. They also respectfully request the Board of Trustees of the American Medical Association to bend every effort to accomplish this purpose throughout the Association at the earliest possible moment in order that the sane evolutionary progress of medical practice may not be disturbed by social experiments which endanger the health and the welfare of our citizenship, and which have proved a pernicious health influence in other nations.

A similar resolution adopted by the Council of the State Medical Society of Wisconsin has also been submitted.

Employees

The total number of employees engaged in the service of the Association on April 1, 1933, was 474, as compared with 490 on a similar date in the previous year. The number of employees varies from time to time in accordance with immediate requirements in the mechanical departments.

The Board of Trustees acknowledges with genuine pleasure its great appreciation of the faithful, loyal and efficient service of the entire working personnel of the Association.

Respectfully submitted.

A. R. MITCHELL, Chairman.
J. H. WALSH, Secretary.
ARTHUR W. BOOTH.
D. CHESTER BROWN.
ALLEN H. BUNCE.
THOMAS S. CULLEN.
JOSEPH A. PETTIT.
ROCK SLEYSTER.
J. H. J. UPHAM.

APPENDIX

GRANTS OF COMMITTEE ON THERAPEUTIC RESEARCH

The following is a list of the investigations conducted with the assistance of grants made by the Committee on Therapeutic Research, reports of which were published during 1932:

1. Sensitization Dermatoses of Nonfungous Nature, Cleveland White and Samuel J. Taub: THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Feb. 13, 1932.

2. On the Pharmacologic Action of Some New Choline Derivatives in Relation to Their Chemical Constitution, W. F. von Oettingen and D. F. Eveleth: *Journal of Pharmacology and Experimental Therapeutics*, April, 1932.

3. Treatment of Superficial Fungus Infections with the Long Wavelength Roentgen Rays (Grenz Rays): Further Observations, Maurice Dorne and Cleveland White: *Radiology, Journal of the Radiological Society of North America*, April, 1932.

4. Notes on Toxicity and Pharmacology of Indium, W. F. von Oettingen: *Proceedings of the Society for Experimental Biology and Medicine*, June, 1932.

5. Comparative Studies on Mercurochrome and Other Antiseptics, W. F. von Oettingen, O. V. Calhoun, V. A. Badertscher and R. E. Pickett: THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, July 9, 1932.

6. The Tranquilizing Potency of Morphine, Pantopon, Codeine, Papaverine and Narcotine, O. W. Barlow: THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Sept. 17, 1932.

7. The Preanesthetic Value of Scopolamine and Mixtures of Scopolamine and Morphine in Relation to Nitrous Oxide Anesthesia in the Rat, O. W. Barlow: *Journal of Pharmacology and Experimental Therapeutics*, October, 1932.

8. The Premedication Values of Morphine, Codeine, Papaverine, Narcotine and Pantopon in Relation to Nitrous Oxide Anesthesia, O. W. Barlow and M. F. Stormont: *Journal of Pharmacology and Experimental Therapeutics*, October, 1932.

During 1932 the following grants were made:

Grant 180: Arnold H. Maloney, head of the department and professor of pharmacology, Howard University School of Medicine, $200, to investigate picrotoxin-barbiturate antagonism.

Grant 181: A. J. Carlson, chairman of the department and professor of physiology, and Broda O. Barnes, Department of Physiology, University of Chicago, $250, to investigate a new method for thyroid assay.

Grant 182: R. R. Kracke, chairman of the department and associate professor of pathology, Emory University School of Medicine, $250, to investigate bone marrow stimulation.

Grant 183: W. F. von Oettingen, assistant professor of pharmacology, Western Reserve University School of Medicine, $100, to investigate the therapeutic value of indium compounds.

Grant 184: George R. Cowgill, associate professor of physiological chemistry, Laboratory of Physiological Chemistry, Sterling Hall of Medicine, Yale University, $250, to investigate peptic secretagogues.

Grant 185: A. D. Hirschfelder, professor of pharmacology and head of the department, University of Minnesota Medical School, $250, to investigate the concentration of calcium and of magnesium in the blood in experimental and clinical conditions.

Grant 186: Department of Pharmacology, Western Reserve University School of Medicine, $370, to investigate the excretion of metals in syphilis therapy.

Grant 187: Curtis Bruen, Beth Israel Hospital, $60, to investigate the therapeutic efficacy of bismuth subnitrate in arterial hypertension.

Grant 188: Moyer S. Fleisher, professor and director of Department of Bacteriology and Hygiene, St. Louis University School of Medicine, $250, to investigate serum sickness.

Grant 189: O. W. Barlow, assistant professor of pharmacology, Western Reserve University School of Medicine, $300, to investigate the effects of a series of analeptics against pentobarbital, tribrom-ethanol ("Avertin") and chloral hydrate.

Grant 190: John R. Murlin, director and professor of physiology, Department of Vital Economics, University of Rochester School of Medicine, $200, to investigate the administration of insulin by mouth.

Grant 191: Robert Gesell, professor of physiology, University of Michigan, $250, to investigate action potentials involved in the control of respiration.

Grant 192: Carl J. Wiggers, professor of physiology, Western Reserve University School of Medicine, $250, to investigate the effect of drugs on the coronary circulation in intact dogs.

Grant 193: J. P. Quigley, senior instructor in physiology, Western Reserve University School of Medicine, $150, to investigate gastrointestinal motility.

Grant 194: Sarah A. Riedman, Columbia University College of Physicians and Surgeons, $200, to investigate the effect of a high fat or ketogenic diet on the susceptibility of animals to convulsions of experimental origin.

Grant 195: Eugene U. Still, assistant professor of physiology, University of Chicago, $250, to investigate the factors controlling pancreatic function.

The following grants were issued before Jan. 1, 1932. In some cases the grant has expired and an unexpended balance remains, or the work is not yet completed or the report has not yet been published:

Grant 88: M. S. Dooley, professor of pharmacology, Syracuse University College of Medicine, $75, to aid in the completion of an investigation on a comparison of the results of intramuscular injections in the frog of various preparations of digitalis, with colorimetric assays of the same.

Grant 102: Charles W. Greene, professor of physiology and pharmacology, University of Missouri Department of Physiology, $250, to investigate the distribution of nitrous oxide and oxygen in the blood during anesthesia.

Grant 119: Nicholas Kopeloff, associate in bacteriology, psychiatric Institute (New York City), $100, to investigate bacillus acidophilus milk for the prevention and treatment of summer diarrhea in babies.

Grant 143: Cleveland J. White, M.D., 104 South Michigan Avenue, Chicago, $150, to investigate the local, general and prophylactic aspects of superficial fungus diseases of the skin.

Grant 152: C. W. Greene, professor of physiology and pharmacology, University of Missouri School of Medicine, $300, to investigate the reaction of the coronary system to drugs.

Grant 158: R. G. Hoskins, M.D., director of research, Worcester State Hospital, $250, to investigate growth-promoting and sex-stimulating fractions of anterior lobe pituitary extracts on human metabolism.

Grant 164: E. L. Jackson, associate professor of pharmacology, Emory University, $200, to investigate the antagonism between sodium barbital and insulin.

Grant 165: F. B. Flinn, associate professor of physiology, and Adelaide Ross Smith, associate professor in medicine, Columbia University, $250, to investigate the effect of viosterol on the elimination of lead after lead poisoning.

Grant 166: Jean Oliver, professor of pathology, Hoagland Laboratory, Long Island College Hospital, $200, to investigate experimental nephritis in the frog.

Grant 168: N. E. Schreiber, research fellow, Department of Pharmacology, Morley Chemical Laboratory, Western Reserve University, $250, to investigate the excretion of mercury after oral administration.

Grant 169: C. W. Greene, professor of physiology and pharmacology, University of Missouri School of Medicine, $250, to investigate the pharmacology of camphor and camphor derivatives.

Grant 170: Moyer S. Fleisher, professor and director of Department of Bacteriology and Hygiene, St. Louis University School of Medicine, $250, to investigate serum sickness.

Grant 171: Ernest C. Dickson, professor of Department of Public Health and Preventive Hygiene, Stanford University School of Medicine, $250, to investigate therapeutic procedures against coccidioidal granuloma.

Grant 174: Treat B. Johnson, Sterling professor of chemistry, Yale University, $250, to investigate protein sugar fractions and their antigenic properties.

ADDENDA TO REPORT OF BOARD OF TRUSTEES

TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ended Dec. 31, 1932

Reserve Invested as at Dec. 31, 1931	$1,810,991.38	
Bonds Purchased (Cost)	104,020.00	
	$1,915,011.38	
Less Bonds Called	19,180.00	$1,895,831.38
Balance for Investment Dec. 31, 1931	$ 8,441.74	
Interest on Investments	76,207.24	
Interest on Monthly Bank Balance	474.76	
Proceeds on Bond Sales	15,000.00	100,123.74
Invested and Uninvested Reserve as at Dec. 31, 1932		$1,995,955.12

DAVIS MEMORIAL FUND

Balance Fund Dec. 31, 1931	$6,271.16	
1932 Interest on Bank Balance	189.53	
Total Fund as at Dec. 31, 1932 on Deposit		$ 6,460.69

AUSTIN A. HAYDEN, Treasurer.

Jan. 12, 1933.

AUDITOR'S REPORT

To Board of Trustees, January 31, 1933.
American Medical Association, Chicago, Illinois.

Dear Sirs:

In accordance with instructions, we have examined the accounts of the American Medical Association, for the year ended December 31, 1932, and have prepared therefrom, and append hereto, the statements undermentioned:

Exhibit "A"—Balance Sheet, as at December 31, 1932.
Exhibit "B"—Income Account, for the year ended December 31, 1932.
Schedules for the year ended December 31, 1932:
Schedule "1"—Journal Operating Expenses.
Schedule "2"—Association and Miscellaneous Expenses.

In our opinion, based on our examination and information furnished to us, the accompanying Balance Sheet and relative Income Account set forth the financial position of the Association as at December 31, 1932, and the results of its operations for the year ended on that date, subject to the following qualifications and observations:

(1) The inventories of Materials, Supplies and Work in Progress in the amount of $64,635.51, are stated in accordance with affidavits sworn to by responsible officials of the Association and have not been verified by us in any way.

(2) In accordance with the established practice of the Association, no provision has been made for (a) accrued interest on bonds, (b) memberships due and unpaid, (c) accrued salaries and wages, and (d) accrued property taxes for the year 1932.

(3) Depreciation as reflected in the Income Account (detailed in Schedules "1" and "2") has been computed on diminishing values at December 31, 1932, at rates which normally apply to cost of buildings and equipment.

(4) Subscriptions paid in advance represent an estimated amount based on cash received for subscriptions for the year 1933, received in the month of December, 1932. This conforms with the method used in prior years.

(5) Advance payments on publications represent an estimated amount of prepaid subscriptions to HYGEIA, $97,820.66, plus $24,081.69 received in advance for January advertising and directory service.

As stated in our last two previous reports there are certain lawsuits pending against the Association or against some officer for whose alleged libel the Association is sought to be made liable. One of these lawsuits in which a large amount was claimed as damages was decided in favor of the Association during the year ended December 31, 1932. We have received a certificate from an official of the Association stating that the Association believes the lawsuits still in litigation will be decided favorably to the Association.

Fidelity insurance is carried against the undermentioned officers and employees of the Association in amounts here stated:

Dr. Austin A. Hayden, Treasurer	$10,000.00
Dr. Olin A. West, General Manager	10,000.00
E. C. Shelly, Cashier	10,000.00
E. A. Hoffman, Assistant Cashier	2,000.00
Sundry Employees (nine, $1,000.00 each)	9,000.00
Total Fidelity Insurance	$41,000.00

We have pleasure in reporting that the books are well maintained and that every facility was afforded us for the proper conduct of the examination.

Yours truly, PEAT, MARWICK, MITCHELL & CO.

STATEMENTS

EXHIBIT "A"

BALANCE SHEET AS AT DECEMBER 31, 1932

ASSETS:		
Property and Equipment (at cost, less depreciation):		
Real Estate and Buildings		$ 749,813.48
Machinery		135,037.73
Type and Metal		13,337.55
Furniture and Equipment		51,458.54
Chemical Laboratory		3,297.41
Library		339.72
Total Property and Equipment		$ 953,284.43
Investments (at cost):		
U. S. Government Securities	$1,000,577.13	
Railroad, Municipal and other bonds	895,254.25	1,895,831.38
Cash held by Treasurer for Investment		100,123.74
Cash in Banks and on Hand		135,666.37
Temporary Investment—Certificate of Deposit		100,000.00
Accounts receivable:		
Advertising	$ 90,339.54	
Co-operative Medical Advertising Bureau	8,728.49	
Reprints	6,140.49	
Miscellaneous	6,424.47	111,632.99
City of Chicago Tax Anticipation Warrants		250.00
Note Receivable		85.13
Inventories of Materials, Supplies and Work in Progress		64,635.51
Expenditures on Publications in Progress		37,210.36
Prepaid Expenses—Insurance, etc		1,986.35
Total		$3,400,706.26
LIABILITIES:		
Accounts Payable:		
Co-operative Medical Advertising Bureau		$ 7,100.60
Miscellaneous		23,482.72
		$ 30,583.32
Pershing Hall Medical Memorial		2,510.10
Subscriptions Paid in Advance		119,844.39
Advance Payments on Publications		121,902.35
Net Worth:		
Association Reserve Fund	$ 250,000.00	
Building Reserve Fund	750,000.00	
Capital Account:		
Amount thereof as at December 31, 1931	$2,032,023.35	
Net Income for the year ended December 31, 1932	93,842.75	2,125,866.10
Net Worth as at December 31, 1932		3,125,866.10
Total		$3,400,706.26

EXHIBIT "B"

INCOME ACCOUNT

FOR THE YEAR ENDED DECEMBER 31, 1932

JOURNAL:		
Gross Earnings:		
Fellowship Dues and Subscriptions		$ 550,615.06
Advertising		860,639.57
Jobbing		93,871.02
Reprints		3,913.51
Books		8,537.80
Insignia		5,014.37
Miscellaneous Sales		7,836.88
Interest		4,181.77
Gross Earnings from Journal		$1,534,609.98
Operating Expenses—Schedule "1"		929,514.29
Net Earnings from Journal		$ 605,095.69
Miscellaneous Income:		
Rents	$ 1,000.00	
Sundry Publications	23,466.86	24,466.86
Association Income:		
Income from Investments	$ 74,967.03	
Profit on Sales of Securities	80.25	
Grand Avenue Property	724.19	75,771.47
Gross Income		$ 705,334.02
Association Expenses—Schedule "2"	$ 343,307.45	
Miscellaneous Expenses—Schedule "2"	268,183.82	611,491.27
Net Income		$ 93,842.75

SCHEDULE "1"

JOURNAL OPERATING EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 1932

Wages and Salaries			$ 438,838.59
Editorials, News and Reporting			13,033.22
Paper—Journal Stock			215,016.84
Paper—Miscellaneous			2,012.75
Electrotypes and Engravings			19,813.17
Binding			599.50
Ink			4,438.47
Postage—First Class			36,124.95
Postage—Second Class			56,383.43
Journal Commissions			7,394.31
Collection Commissions			1,901.33
Discounts			29,693.25
Express and Cartage			5,018.07
Exchange			3,782.61
Office Supplies			2,073.22
Telephone and Telegraph			3,072.01
Office Jobbing			9,735.97
Power and Light			7,201.12
Factory Supplies			9,079.25
Repairs and Renewals—Machinery			9,601.77
Miscellaneous Operating Expenses			20,104.95
Loss on Bad Debts			4,037.31
Total JOURNAL Operating Expenses before provision for Depreciation			$ 898,956.09
Depreciation on Equipment (computed on diminishing balances):			
Machinery	% 10	$15,004.19	
Furniture and Equipment	% 20	10,278.38	
Factory Equipment	% 20	2,586.25	
Type	% 10	516.00	
Metal	% 20	2,173.38	30,558.20
Total Journal Operating Expenses			$ 929,514.29

SCHEDULE "2"

ASSOCIATION AND MISCELLANEOUS EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 1932

Association Expenses:	
Association	$ 101,927.35
Health and Public Instruction	14,615.26
Pharmacy and Chemistry	26,876.98
Food Committee	10,779.52
Chemical Laboratory	24,861.04
Medical Education and Hospitals	68,849.82
Organization and Field Secretary	1,888.46
Therapeutic Research	3,203.04
Legal Medicine and Legislation	30,615.38
Bureau of Investigation	21,142.17
Bureau of Medical Economics	17,075.67
Physical Therapy	12,176.45
Bureau of Association Exhibits	2,431.25
Sessions 1932	6,498.68
Laboratory Depreciation (10% on diminishing balances)	366.38
Total Association Expenses	$ 343,307.45
Miscellaneous Expenses:	
Insurance and Taxes	$ 27,094.27
Legal and Investigation	53,963.98
Building Expenses	28,548.08
Building Depreciation (5% on diminishing balances)	22,320.72
Library Depreciation (10% on diminishing balances)	37.75
Fuel	6,100.90
Sundry Publications	130,118.12
Total Miscellaneous Expenses	$ 268,183.82

Report of the Committee on Scientific Research for 1932

During the year, 111 applications for grants have been received. Forty-three awards have been made (grants 230 to 272 inclusive), the total amount awarded being $15,450. Forty-one applications have been declined, three were withdrawn, and twenty-two are under active consideration. One grant has been relinquished and refunded. The new grants provide support for research in various fields of medical science. In all cases the money has been paid to the financial officer of the institution with which the grantee is connected, the grants being disbursed on requisitions by grantees. Recent reports of the progress of the work and of the disbursements indicate that the work under grants is making satisfactory progress with perhaps one or two exceptions. The results of work under nineteen grants prior to 1932 have been published. The results of work under twenty-three grants prior to 1932 are in the course of publication or of preparation for publication. In the case of twenty-two grants made before 1932, active work is still in progress, but in several instances results of the work have been published. Refunds amounting to $2,935.25 have been made from eleven grants.

The committee begs leave to recommend that the same appropriation be made for 1933 as for 1932; namely, $12,550 for grants in aid of medical research and $1,200 for the expenses of the committee.

Financial statement and list of the grants for 1932 as well as brief accounts of the grants pending at the end of 1931 are given.

Respectfully submitted.

COMMITTEE ON SCIENTIFIC RESEARCH OF THE AMERICAN MEDICAL ASSOCIATION,

JOHN J. MORTON, Rochester, N. Y.
Term expires, 1933.

N. W. JONES, Portland, Ore.
Term expires, 1934.

MARTIN H. FISCHER, Cincinnati.
Term expires, 1935.

LUDVIG HEKTOEN, Chicago, Chairman.
Term expires, 1936.

C. C. BASS, New Orleans.
Term expires, 1937.

GRANTS OF COMMITTEE ON SCIENTIFIC RESEARCH

NEW GRANTS

Grant 230: Alexander S. Wiener, Jewish Hospital of Brooklyn, $50 for a study of agglutinogen N.

Grant 231: George T. Pack, Memorial Hospital, New York, $500 to complete an analysis of 300 cases of melanoma.

Grant 232: Laurence H. Snyder, Ohio State University, $50 for work on hereditary factors in congenital deafness.

Grant 233: Detlev W. Bronk, University of Pennsylvania School of Medicine, $550 for studies on the nervous regulation of the circulation.

Grant 234: Alfred Friedlander, Cincinnati General Hospital, $250 for study of temperature variations in different parts of the skin.

Grant 235: E. A. Smith, Iowa State College, $100 for study of the effects of illuminating gas and amyl acetate on the rat.

Grant 236: C. H. Thienes, University of Southern California, $400 for studies on the relation of the mesenteric nerves to the myenteric ganglions and plexuses.

Grant 237: Israel S. Kleiner, New York Homeopathic Medical College and Flower Hospital, $500 to investigate the possible presence of a lactose-splitting or lactose-synthesizing enzyme in mammary tissue.

Grant 238: Harold E. Himwich, Yale University, $1,000 to study the relation of the autonomic nervous system to metabolism and effect of alcohol on metabolism.

Grant 239: Victor C. Jacobsen, Albany Medical College, $1,000 for a study of transplantable mouse melanoma.

Grant 240: William D. McNally, Rush Medical College, $650 for a study of the effect of tobacco tar on the lungs of rats and other animals.

Grant 241: N. Michels, Jefferson Medical College, $200 for study of erythropoiesis.

Grant 242: Ernest Carroll Faust, Tulane University, $1,000 for a study of strongyloidosis.

Grant 243: Wilbur A. Selle, University of Texas Medical School, $250 for work on the relationship between carbohydrate metabolism and the growth rate of experimental tumors.

Grant 244: Theodore Cornbleet, University of Illinois Medical School, $250 for study of self sterilization of the skin.

Grant 245: M. S. Burman, Hospital for Joint Diseases, New York, $200 for study of the fluorescense of cartilage.

Grant 246: W. C. Langston and Paul L. Day, University of Arkansas, $400 for a study of vitamin G deficiency in the monkey, with special reference to cataract.

Grant 247: Wilson D. Langley, University of Buffalo, $250 for work on the formation of acetone bodies in diabetic animal tissue.

Grant 248: Helen C. Coombs, New York Homeopathic Medical College and Flower Hospital, $575 for work on the relationships between epilepsy and tetany.

Grant 249: Arthur H. Smith, Yale University, $350 for a study of the acid-base balance and the osmotic pressure of the blood of stunted albino rats.

Grant 250: S. S. Lichtman, Mount Sinai Hospital, New York, $400 for work on a method of estimating bile salts in body fluids.

Grant 251: Esther B. Tietz, University of Cincinnati, $250 for work on so-called pseudopregnancy in rabbits.

Financial Statement for 1932

Balance Jan. 1, 1932		$ 2,700.42
Appropriation for 1932		13,750.00
Refund, grant 158		640.09
Refund, grant 167		60.81
Refund, grant 171		290.41
Refund, grant 199		29.80
Refund, grant 207		.11
Refund, grant 211		969.89
Refund, grant 212		97.50
Refund, grant 213		27.14
Refund, grant 228		319.50
Refund, grant 257		250.00
Refund, grant 258		250.00
		$19,385.67

Grants and Expenses Paid in 1932

Grant 229 (193), Timothy Leary	$ 510.00	
Grant 230, Alexander S. Wiener	50.00	
Grant 231, George T. Pack	500.00	
Grant 232, Laurence H. Snyder	50.00	
Grant 233, Detlev W. Bronk	550.00	
Grant 234, Alfred Friedlander	250.00	
Grant 235, E. A. Smith	100.00	
Grant 236, C. H. Thienes	400.00	
Grant 237, Israel S. Kleiner	500.00	
Grant 238, Harold E. Himwich	1,000.00	
Grant 239, Victor C. Jacobsen	1,000.00	
Grant 240, Wm. D. McNally	650.00	
Grant 241, N. Michels	200.00	
Grant 242, E. C. Faust	1,000.00	
Grant 243, Wilbur A. Selle	250.00	
Grant 244, Theodore Cornbleet	250.00	
Grant 245, M. S. Burman	200.00	
Grant 246, W. C. Langston & P. L. Day	400.00	
Grant 247, Wilson D. Langley	250.00	
Grant 248, Helen C. Coombs	575.00	
Grant 249, Arthur H. Smith	350.00	
Grant 250, S. S. Lichtman	400.00	
Grant 251, Esther B. Tietz	250.00	
Grant 252, Bernhard Steinberg	250.00	
Grant 253, Willard O. Thompson	250.00	
Grant 254, J. Lisle Williams	200.00	
Grant 255, Max Wishnofsky	100.00	
Grant 256, Allen D. Keller	500.00	
Grant 257, M. G. Seelig	500.00	
Grant 258, Jack C. Norris	250.00	
Grant 259, Daniel A. McGinty	150.00	
Grant 260, Frank R. Menne	150.00	
Grant 261, R. S. Cunningham	300.00	
Grant 262, S. Alexander Hellwig	100.00	
Grant 263, H. J. Deuel, Jr	500.00	
Grant 264, Wm. H. Welker	200.00	
Grant 265, S. W. Ranson	400.00	
Grant 266, Herbert E. Landes	400.00	
Grant 267, M. S. Dooley	200.00	
Grant 268, W. O. Thompson	250.00	
Grant 269, M. M. Wintrobe	250.00	
Grant 270, Edwin F. Hirsch	500.00	
Grant 271, S. S. Lichtman	75.00	
Grant 272, Joseph L. Donnelly	750.00	
Clerical expenses	600.00	
Committee expense	411.69	
Printing	49.71	
		$17,021.40
Balance on hand		$ 2,364.27

Grant 259: Daniel A. McGinty, Emory University, $150 for study of lactic acid, dextrose and oxygen absorption and carbon dioxide production by heart muscle.

Grant 260: Frank R. Menne, University of Oregon, $150 for study of the structural changes in the heart in hyperthyroidism.

Grant 261: R. S. Cunningham, Vanderbilt University, $300 for work on the effects of certain colloidal solutions on experimental syphilis.

Grant 262: C. Alexander Hellwig, St. Francis Hospital, Wichita, $100 for study of the effect of iodine on the thyroid gland of the white rat.

Grant 263: H. J. Deuel, Jr., University of Southern California, $500 for a study of the cause of difference in carbohydrate metabolism between the sexes.

Grant 264: William H. Welker, University of Illinois, Chicago, $200 for the preparation and study of hematin in its relation to the benzidine and other tests for blood.

Grant 265: S. W. Ranson, Northwestern University, Chicago, $400 for study of structure and function of cutaneous nerves in man.

Grant 266: Herbert S. Landes, Loyola University, Chicago, $400 for study of the mechanics of residual urine.

Grant 267: M. S. Dooley, Syracuse University, $200 for study of the blood supply of individual heart muscle bundles.

Grant 268: W. O. Thompson, Rush Medical College, $250 for study of relation between thyroxine and glutathione oxidation system.

Grant 269: M. M. Wintrobe, Johns Hopkins Hospital, $250 for study of vertebrate red corpuscles.

Grant 270: Edwin F. Hirsch, St. Luke's Hospital, Chicago, $500 for determination of copper and "active" iron in tissues in infection and toxemia.

Grant 271: S. S. Lichtman, Mount Sinai Hospital, New York, $75 to complete methods for estimating bile salts in normal body fluids.

Grant 272: Joseph L. Donnelly, University of Cincinnati, $750 for work on the coagulation of biologic materials.

STATE OF WORK UNDER PREVIOUS GRANTS

1. Completed During the Year

"Completed" means that the work immediately aided by a grant has been concluded, that account has been made of the expenses, and that results of the work have been published.

Grant 113, 1927: $500 to C. W. Apfelbach, Presbyterian Hospital, Chicago, for work on the renal function after glomerular infarction ($95.09 refunded). Miller, E. M., and Apfelbach, C. W.: Experimental Infarction of the Glomeruli in Dogs, *Arch. Path.* **4:** 193, 1927. Jensen, C. R., and Apfelbach, C. W.: Method of Making Repeated Determinations of the Intra-Arterial Systolic Blood Pressure in Dogs, *ibid.* **6:** 99, 1928; Blood Pressure in Chronic Renal Insufficiency, *ibid.* **13:** 255, 1932.

Grant 117, 1927: $250 to Warren C. Hunter, University of Oregon School of Medicine, for study of experimental chronic nephritis. Hunter, Warren C., and Roberts, J. M.: Glomerular Changes Induced by Uranium Nitrate, Mercuric Chloride and Potassium Bichromate, *Am. J. Path.* **8:** 665, 1932.

Grant 123, 1927: $500 to S. R. Gifford, University of Nebraska School of Medicine, for study of the chemical properties of the normal and the cataractous lens. Gifford, Harold, Jr.: Determination of the Oxidation-Reduction Mechanism in the Lens of Rabbits with Naphthalene Cataract, *Arch. Ophth.* **7:** 763, 1932.

Grant 150, 1929: $200 to Benjamin Friedman, Knapp Memorial Eye Hospital, New York, for the study of ocular pulsations by graphic methods. Friedman, Benjamin: New Method of Registering Graphically the Ocular Pulse, *Arch. Ophth.* **8:** 733, 1932.

Grant 158, 1929: $2,000 to G. R. LaRue and A. S. Warthin, University of Michigan, for work on the broad tapeworm in continuation of work under grants 96, 1926, and 131, 1928 (refund $640.09). Vergeer, Teunis: Causes Underlying Increased Incidence of Broad Tapeworm in Man in North America, J. A. M. A. **95:** 1579, 1930. The publication is contemplated of a monograph by Teunis Vergeer, entitled "Diphyllobothrium Latum in North America, with Notes on Related Cestoda."

Grant 171, 1929: $2,500 to National Research Council, for the study of undulant fever under the auspices of the council's committee on infectious abortion (refund $290.41). Huddleson, I. F.: Brucellosis: I. Significance of Brucella Agglutinins in the Blood of Veterinarians, J. A. M. A. **94:** 1905, 1930; Differentiation of the Species of the Genus Brucella, *Am. J. Pub. Health* **21:** 49, 1931; Diagnosis of Brucella Infection in Animals and in Man by Rapid Macroscopic Agglutination, Technical Bulletin 123, 1932, Agricultural Experiment Station, Michigan State College. Johnson, H. W., and Shall, S. B.: Abortion Accompanies Brucella Suis Infection in a Sow, *Quart. Bull. Agric. Exper. Station, Michigan State Coll.* **13:** 209, 1931. Johnson, H. W., and Huddleson, I. F.: Natural Brucella Infection in Swine, *J. Am. Vet. M. A.* **78:** 849, 1931. Huddleson, I. F., and Johnson, H. W.: Study of Anti-Hog Cholera Serum and Virus for the Presence of Brucella, *ibid.* **79:** 635, 1931; Phagocytosis of Brucella, an Index of Immunity to Undulant Fever, *Science* **74:** 315, 1931.

Grant 172, 1930: Detlev W. Bronk, University of Pennsylvania, $175 for study of the nervous regulation of the heart. Bronk, Detlev W., and Stella, G.: Afferent Impulses in the Carotid Sinus Nerve, *J. Cellular & Comp. Physiol.* **1:** 113, 1932; *Proc. Soc. Exper. Biol. & Med.* **29:** 443, 1932.

Grant 176, 1930: Fred J. Wampler, Medical College of Virginia, Richmond, $1,200 for the study of the lung involvement in human ascariasis (refund, $174.12). Wampler, Fred J., and Sutton, L. E.: A Study of the Lung Involvement in Human Ascariasis, *Virginia M. Monthly* **59:** 67, 1932.

Grant 180, 1930: Stanhope Bayne-Jones, University of Rochester, New York, $500 for the study of chemotherapy of tuberculosis by Georges Knaysi (refund, $271.30). Knaysi, Georges: The Toxicity of Iodine for the Cells of Mycobacterium Tuberculosis, *J. Infect. Dis.* **50:** 255, 1932; The Use of Iodine and of Certain Iodine Compounds in Experimental Tuberculosis, *ibid.*, p. 261.

Grant 190, 1930: Theodore Cornbleet, University of Illinois Medical School, Chicago, $500 for study of effect of carbohydrate metabolism and light on the skin. Kaplan, M. A.: A Simple Method for the Preparation of Hematoporphyrin, *J. Lab. & Clin. Med.* **18:** 309, 1932. Cornbleet, Theodore, and Klein, R. I.: Capillary Permeability in Disorders of the Skin, *Arch. Dermat. & Syph.* **26:** 21, 1932.

Grant 191, 1930: G. E. Burget, University of Oregon Medical School, Portland, $500 for work on the closed intestinal loop. Burget, G. E.; Moore, P., and Lloyd, Robert: The Relative Absorption Rates of Dextrose and Levulose; Is Levulose Converted to Dextrose in the Process of Absorption from the Intestines? *Am. J. Physiol.* **101:** 565 and 570, 1932.

Grant 193, 1930: Harry J. Deuel, Jr., University of Southern California, Los Angeles, $300 for study of the antiketogenic value of various carbohydrates (refund, $30.12). Deuel, Harry J., Jr.; Gulick, M., and Butts, J. S.: Relative Antiketogenic Value of Glucose and Galactose, *J. Biol. Chem.* **98:** 333, 1932.

Grant 199, 1931: Israel S. Kleiner, New York Homeopathic Medical College and Flower Hospital, $500 for work on the crystallization of rennin (refund, $29.80). Tauber, Henry, and Kleiner, Israel S.: Studies on Crystalline Urease, *J. Gen. Physiol.* **15:** 151, 1931. Kleiner, Israel S., and Tauber, Henry: Studies on Rennin, *J. Biol. Chem.* **96:** 745 and 755, 1932.

Grant 206, 1931: David Polowe, Paterson, N. J., and Sydenham Hospital, New York, $50 for determination of the specific gravity of the blood in the prenatal and postnatal states. Polowe, David: The Specific Gravity of the Blood in Pregnancy and in the Puerperium, *Am. J. Obst. & Gynec.* **23:** 843, 1932.

Grant 208, 1931: I. S. Ravdin, University of Pennsylvania School of Medicine, $600 for a study of the absorptive function of the gallbladder. Ravdin, I. S., and associates: Studies of Gallbladder Function, *Am. J. Physiol.* **99:** 638, 648 and 656, 1932.

Grant 212, 1931: Timothy Leary, Office of the Medical Examiner, Boston, $250 for study of the early lesions of rheumatic endocarditis (refund, $97.50). Leary, Timothy: Early Lesions of Rheumatic Endocarditis, *Arch. Path.* **13:** 1, 1932.

Grant 221, 1931: Mary E. Maver, National Institute of Health, Washington, D. C., $100 toward expenses of publication of results of further work under Grant 144 to I. S. Falk on diphtheria toxin—see report for 1930 (refund, $32). Maver, Mary E.: Chemistry of Diphtheria Toxin. Production in Synthetic Mediums, *J. Infect. Dis.* **49:** 1, 1931; Attenuation of the Diphtheria Bacillus in Synthetic Mediums, *ibid.* **49:** 9, 1931.

Grant 228, 1931: $500 to Herbert U. Williams, University of Buffalo, for illustrations in a review of precolumbian bone syphilis (refund, $329.50). Williams, Herbert U.: The Origin and Antiquity of Syphilis: The Evidence from Diseased Bones, *Arch. Path.* **13:** 779, 1932.

2. Incomplete

A. Work under the grant completed, account rendered of expenses, but results not published fully:

Grant 107, 1927: $500 to H. L. Huber, Chicago, for work on the chemical and immunologic properties of the pollens of hay fever and allied conditions. Huber, H. L.: Critical Analysis of Information Obtained from Hay Fever Sufferers, *J. Allergy* **2:** 48, 1930. Huber, H. L., and Harsh, G. F.: A Summer Dermatitis Caused by a Common Weed, *ibid.* **3:** 578, 1932.

Grant 118, 1927: $1,000 to Edward Reynolds and E. A. Hooton, Harvard University, for study of the mechanism of erect posture.

Grant 167, 1929: $500 to Hans Jensen, Johns Hopkins University, for aid in the chemical and physiologic study of toad poisons (refund, $60.81). Jensen, Hans, and Chen, K. K.: Chemical Studies on Toad Poisons, *J. Biol. Chem.* **87:** 741 and 755, 1930. Jensen, Hans: *Science* **75:** 53, 1932.

Grant 181, 1930: Erwin Brand, New York State Psychiatric Institute and Hospital, $700 for research in cystinuria (refund, $366.67).

Grant 182, 1930: Icie G. Macy, Merrill-Palmer School, Detroit, $500 for a study of vitamins A and B in human breast milk. Donelson, Eva, and Macy, Icie G.: Human Milk Studies, *Am. J. Physiol.* **100:** 420, 1932.

Grant 184, 1930: Herbert F. Thurston, Indiana University, Indianapolis, $300 for study of the suturing of blood vessels.

Grant 189, 1930: Ralph H. Major, University of Kansas, Lawrence, $500 for study of depressor substances in the brain, liver and pancreas.

Grant 177 and 192, 1930: W. T. Dawson, University of Texas School of Medicine, Galveston, $250 for chemical and physiologic study of alkaloids of the cinchona series. Dawson, W. T., and Newman, S. P.: Acquired Allergic Coryzal Reactions to Quinine But Not to Quinidine or Quitenine, J. A. M. A. **97:** 930, 1931. Sanders, J. P., and Dawson, W. T.: Efficacy of Quinidine in Malaria, J. A. M. A. **99:** 1773, 1932. Bevil, H. G.: Hydroquinidine in Malaria, *Am. J. Trop. Med.* **12:** 473, 1932.

Grant 194, 1930: C. H. Thienes, University of Southern California, Los Angeles, $500 for study of the relationship between the myenteric plexus and ganglions and the mesenteric nerves. Shulter, Lillian, and Thienes, C. H.: Analysis of the Actions of Cocaine on Excised Smooth Muscles, *Proc. Soc. Exper. Biol. & Med.* **28:** 994, 1931. Hendricks, Max D., and Thienes, C. H.: A Pharmacologic Study of the Inhibitory Mesenteric Nerves to the Intestines, *ibid.* **28:** 993, 1931.

Grant 195, 1930: Helen T. Parsons, University of Wisconsin, $300 for further study of the physiologic effects of high protein diets (see grant 175, 1930, and 227, 1931).

Grant 196, 1930: Ward W. Summerville, Institute of Pathology, Western Reserve University, $150 for a study of the effects of anemia of the kidney. Summerville, Ward W.; Hanzal, R. F., and Goldblatt, H.: Urea Clearance in Normal Dogs, *Am. J. Physiol.* **102:** 1, 1932.

Grant 200, 1931: C. A. Dragstedt, Northwestern University Medical School, $250 (Van Zwalenburg Fund) for a study of experimental appendicitis and related problems.

Grant 203, 1931: W. J. Merle Scott, University of Rochester School of Medicine and Dentistry, $300 toward a study of the rôle of the suprarenal cortex in pyogenic infections.

Grant 207, 1931: Maurice L. Cohn, National Jewish Hospital, Denver, $250 for work on the cultivation of the tubercle bacillus (refund, 11 cents).

Grant 210, 1931: Harold E. Himwich, Yale University School of Medicine, $500 for a study of fat metabolism in diabetes. Himwich, Harold E., and Spiers, M. A.: The Degree of Saturation of Blood Fats Mobilized During Diabetes, *Proc. Soc. Exper. Biol. & Med.* **29:** 235, 1931.

Grant 211, 1931: Ward Giltner and I. Forest Huddleson, Michigan State College, $1,500 for an investigation of Brucella infection in swine and in workers in packing plants (refund, $969.89).

Grant 213, 1931: Harold G. Grayzel, The Jewish Hospital of Brooklyn, $500 for a study of experimental amyloidosis.

Grant 216, 1931: W. R. Tweedy, Loyola University School of Medicine, Chicago, $750 for continuation of work under grants 143 and 146, 1928, on the parathyroid hormone.

Grant 217, 1931: E. B. Hart and C. A. Elvehjem, University of Wisconsin, $600 toward a study of phosphorus in rachitic and normal blood.

Grant 219, 1931: Norbert Enzer, Mount Sinai Hospital, Milwaukee, $100 for an investigation of the gases produced by the combustion of x-ray films.

Grant 220, 1931: David Polowe, Paterson, N. J., and Memorial Hospital, New York, $100 for a study of the specific gravity of the blood in human cancer.

Grant 223, 1931: Géza de Takáts, Northwestern University Medical School, $600 for aid in studying the effect of celiac ganglionectomy on sugar tolerance.

Grant 227, 1931: Helen T. Parsons, University of Wisconsin, $300 for a continuation of an investigation of the physiologic effects of egg white in continuation of previous work under grants 175 and 195, 1930.

B. Active work still in progress:

Grant 105, 1927: $1,800 to H. B. Ward, University of Illinois, for study of life history of broad fish tapeworm endemic in man in northern Minnesota. For history of the grant and previous publication of results of work under it see the report of the committee for 1931. Articles not listed previously: Essex, H. E.: Early Development of Diphyllobothrium Latum in Northern Minnesota, *J. Parasitol.* **14:** 106, 1927; A New Larval Cestode, Probably Hymenolepis Cuneata, a Tapeworm of a Wild Duck, *ibid.* **18:** 291, 1932.

Grant 133, 1928: $715 to F. Lowell Dunn, University of Nebraska, for spectrophotometric analysis of biologic fluids. Dunn, F. Lowell: A Cylindrical Rotating Sector Photometer, *Rev. Scient. Instruments* **2:** 807, 1931.

Grant 162, 1929: $100 to J. P. Simonds, Northwestern University Medical School, for a study of the action of cinchophen and its derivatives on the liver. Churchill, T. P., and Van Wagoner, F. H.: Cinchophen Poisoning, *Proc. Soc. Exper. Biol. & Med.* **28:** 581, 1931. Van Wagoner, F. H., and Churchill, T. P.: Production of Gastric and Duodenal Ulcers in Experimental Cinchophen Poisoning, J. A. M. A. **99:** 1859, 1932.

Grant 163, 1929: $750 to George Hermann, Tulane University School of Medicine, for the study of problems of the circulation (refund, $17.80). The work under this grant will be carried on to completion by Roy H. Turner, assistant professor of medicine, Tulane University.

Grant 174, 1930: Alfred R. Ross, College of Medical Evangelists, Loma Linda, Calif., $1,455 for study of hay fever pollens in the Southwest.

Grant 179, 1930: George T. Pack, Memorial Hospital, New York, $300 for a study of certain clinicopathologic problems of melanoma. (See grant 231, 1932.)

Grant 183, 1930: Robert W. Hegner, Johns Hopkins University, $1,500 for study of host-parasite relations in man in continuation of work under previous grants 101 (C. A. Brant Fund) 1926; 125, 1927, and 154, 1929. For list of articles on results of work under this grant, see the report of the committee for 1931. New articles: Fish, F.: Quantitative and Statistical Analyses of Infections with Eimeria Tenella in the Chicken, *Am. J. Hyg.* **14:** 560, 1931. Stabler, R. M.: An Extended Study of Variations in a Single Race of a Coli-like Amoeba and Its Bearing on the Specificity of Councilmania Lafleuri, *ibid.* **16:** 1, 1932. Hegner, Robert W.: Differential Reactions of Species and Strains of Trichomonad Flagellates to Changes in the Environment, *ibid.* **16:** 513 1932. Swezey, W. W.: The Transition of Troglodytella Abrassarti and Troglodytella Abrassarti-Acuminata, Intestinal Ciliates of the Chimpanzee, from One Type to the Other, *J. Parasitol.* **19:** 1, 1932.

Grant 187, 1930: A. R. Johnston, University of Cincinnati, $1,000 for a study of the toxic action of poisonous amines.

Grant 197, 1931: J. J. Morton, University of Rochester School of Medicine and Dentistry, $250 (Van Zwalenburg Fund) for a study of the causes of appendicitis.

Grant 198, 1931: Gilbert Dalldorf, Grasslands Hospital, Valhalla, N. Y., $200 for a study of the human uterus by casts and in other ways.

Grant 201, 1931: J. H. Black, Baylor University College of Medicine, $100 for study of the relation of certain pollen fractions.

Grant 202, 1931: James T. Case and C. A. Aldrich, Evanston Hospital, Evanston, Ill., $250 for roentgenologic and clinical study of the thymus.

Grant 204, 1931: Alan M. Chesney, Johns Hopkins Hospital, $1,000 in aid of work on immunity in syphilis.

Grant 205, 1931: Robert M. Oslund, University of Illinois College of Medicine, $150 for a histologic study of the bones and teeth as influenced by the anterior lobe of the hypophysis (refund, $25.20).

Grant 209, 1931: Wilbur A. Selle, University of Texas School of Medicine, $150 for a study of the carbohydrate metabolism in its relation to the growth of tumors. (See grant 243, 1932.)

Grant 214, 1931: Harry J. Deuel, Jr., University of Southern California School of Medicine, $600 for work on ketosis. Deuel, Harry J., Jr., and Gulick, Margaret: The Sexual Variation in Starvation Ketosis, *J. Biol. Chem.* **96:** 25, 1932.

Grant 215, 1931: Daniel A. McGinty, Emory University, Georgia, $150 for a study of the absorption of lactic acid, dextrose and oxygen by the heart muscle in continuation of work under grant 185, 1930.

Grant 218, 1931: Clayton J. Lundy, Rush Medical College, Chicago, $1,000 toward making animated motion pictures of the actions of the heart in health and in disease.

Grant 222, 1931: G. E. Burget, University of Oregon Medical School, $500 toward investigation of absorption from the closed intestinal loop.

Grant 224, 1931: Owen H. Wangensteen, University of Minnesota, $600 in aid of a study of intestinal obstruction in continuation of work under grant 188, 1930. Wangensteen, Owen H., and Carlson, H. A.: Histologic Study of Intestine in Simple Obstruction, *Proc. Soc. Exper. Biol. & Med.* **29:** 421, 1932. Wangensteen, Owen H., and Scott, H. G.: Length of Life Following Various Types of Strangulation Obstruction in Dogs, *ibid.* **19:** 424, 1932; Blood Pressure Changes Correlated with Time, Length and Type of Intestinal Strangulation in Dogs, *ibid.* **29:** 428, 1932. Scott, H. G., and Wangensteen, Owen H.: Effect of Intravenous Injections of Peritoneal Fluids from Dogs with Intestinal Strangulation, *ibid.* **29:** 559, 1932; Blood Losses in Experimental Intestinal Strangulation, ibid. **29:** 748, 1932.

Grant 225, 1931: R. S. Cunningham, Vanderbilt University, Nashville, Tenn., $500 toward a study of the cellular reaction in experimental syphilis with respect to the effects of treatment.

Grant 226, 1931: Warren C. Hunter, University of Oregon Medical School, $100 for a study of the effect of cinchophen on the liver of the dog.

Grant 229, 1931: Timothy Leary, Office of the Medical Examiner, Boston, $810 toward a study of the effect of alcohol and insulin on the deposition of cholesterol in the animal body.

REPORT OF THE JUDICIAL COUNCIL

To the Members of the House of Delegates of the American Medical Association:

The Judicial Council has held its usual meeting during the past year. Numerous inquiries concerning ethical principles and questions of organizational law have been received from the officers of medical societies and from individual physicians in all parts of the country. It has been possible to reply to many of these inquiries on the basis of the Council's experience and official actions, while it has been necessary to refer others for the consideration of the Council at a regular official meeting. Some of the questions have dealt with problems which are altogether new or for which no satisfactory solution has yet been found.

Many inquiries directed to the Council have been concerned with the relations of physicians to each other, and a constantly increasing number have had to do with the matter of compensation for professional service rendered to other physicians or to the members of the families of physicians. Many others have been concerned with the professional attitude that should be assumed by physicians concerning consultations with cult practitioners, and a number of more or less bitter complaints have been registered with the Council concerning the acts of members and Fellows of the American Medical Association who, it is alleged, have maintained rather close professional relations with cultists. This matter was referred to in the official report of the Judicial Council submitted to the House of Delegates in 1924 and was freely discussed on the floor of the House. In replying to specific inquiries the Council has emphasized the importance of maintaining the dignity of medicine and of upholding the soundness of the teachings of scientific medicine as opposed to the fallacies of sectarianism. Either the theories and practices of scientific medicine are right and those of the cultists are wrong, or the theories and practices of the cultists are right and those of scientific medicine are wrong. The physician who maintains professional relations with cult practitioners would seem to exhibit a lack of faith in the correctness and efficacy of scientific medicine and to admit that there is merit in the methods of the cult practitioners.

Many communications have been received pertaining to new forms of medical practice which have been proposed and which, in some instances, have actually been put into operation in various communities. These undertakings have apparently been

considered or initiated largely because of the stress of the present unfavorable economic situation. In replying to all inquiries, the Judicial Council has urged that the most careful scrutiny be made of any and every new plan proposed for providing medical or hospital service. It is not enough that these plans be considered only in the light of present economic conditions; it is essential that they be examined with a view to determining their ultimate effects on the future of medical practice and on the progress of medical science and, above all, they should be examined with the most careful consideration for their possible untoward effects on the public welfare.

APPEALS

During the year, three appeals have been made to the Judicial Council from the decisions of official bodies of constituent state medical associations. Two of these appeals were not heard by the Council because of a lack of jurisdiction created by the acts of appellants themselves. The third appeal was heard by the Council, and the decision of the council of the state medical association concerned was upheld. The questions involved in this hearing had to do with contract practice, and the fundamental issue in dispute was concerned with the ethical character of certain contracts, held by the appellants, to render medical service to groups of people on a monthly per capita plan of payment. The decision of the Judicial Council, upholding the official ruling of the council of the state medical association concerned, was based on principles laid down by the Council in an official report previously submitted to the House of Delegates and adopted by the House as the policy of the American Medical Association and was to the effect that this type of contract is unethical because it is contrary to sound public policy.

PROPOSED REVISION OF CHAPTER II, ARTICLE VI, SECTION 2 OF THE PRINCIPLES OF MEDICAL ETHICS

The pressing and widespread nature of the problem of contract practice and the apparent confusion of mind of a large section of the profession make it advisable to state more specifically in our published Principles of Medical Ethics the principles governing contract practice as adopted from time to time by this House of Delegates. This is advisable also because in these times of social and economic unrest other important questions are being actively discussed, some of which, such as health insurance, are intimately related in principle to that of contract practice.

The Judicial Council therefore recommends that chapter II, article VI, section 2, now reading "It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession" be revised by adding the following:

By the term "contract practice" as applied to medicine is meant the carrying out of an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or a fixed rate per capita.

Contract practice per se is not unethical. However, certain features or conditions if present make a contract unethical, among which are: (1) When there is solicitation of patients, directly or indirectly. (2) When there is underbidding to secure the contract. (3) When the compensation is inadequate to assure good medical service. (4) When there is interference with reasonable competition in a community. (5) When free choice of a physician is prevented. (6) When the conditions of his employment make it impossible to render adequate service to his patients. (7) When the contract because of any of its provisions or practical results is contrary to sound public policy.

Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect for good or ill on the people as a whole.

Respectfully submitted.

GEORGE EDWARD FOLLANSBEE, Chairman.
FRANK W. CREGOR.
JAMES B. HERRICK.
WALTER F. DONALDSON.
EDWIN P. SLOAN.
OLIN WEST, Secretary, ex officio.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

To the Members of the House of Delegates of the American Medical Association:

I. COMMISSIONS OF THE HOUSE OF DELEGATES

1. In 1930, the House of Delegates instructed the Council to make a study of the hospitalization of patients with nervous or mental diseases. The results of this investigation will be submitted in a separate report.

2. In 1931, the House of Delegates instructed the Council "to investigate and make recommendations looking to the establishment of proper qualifications of physicians who shall engage in special practice." An exhaustive study of the situation has led the Council to the conclusion embodied in the following resolution:

Resolved, That should the House of Delegates so order, the Council is prepared to extend to other special fields of medicine the service which it has rendered in the fields of radiology and pathology to the end that members of the medical profession and others who may be concerned may be able readily to distinguish those who have received training in the various branches of medicine from those who are merely self constituted "specialists."

The Council has taken this position for the following reasons:

(*a*) There are so many self anointed but unqualified specialists in the field that the public, the medical profession, the trustees of hospitals, and government officials, are unable to determine who may be trusted to perform those services which require special skill.

(*b*) Unless the American Medical Association shall undertake to make available lists of those who conform to uniform and approved standards in the various special fields of medicine, the multiplicity of other agencies attempting to perform this service will inevitably lead to great confusion on account of the diversity of methods employed. With state legislatures, state boards, state societies, and local and voluntary organizations of every sort assuming to pass judgment on the qualifications of specialists, only chaos can result.

(*c*) The American Medical Association, through THE JOURNAL and the Directory, has means of making its conclusions everywhere available, such as no other organization possesses.

(*d*) For such an undertaking the biographic files of the Association constitute a unique and invaluable aid.

(*e*) The Council already has experience in the preparation of lists of physicians specializing in pathology and radiology, so that the extension of these activities to other branches of medicine is no new and untried venture, but merely the enlargement of an already well established activity.

(*f*) The financial resources and stability of the American Medical Association, representing as it does the entire medical profession of the country, give to such an undertaking a guaranty of permanence and continuity which no other organization could provide.

3. In 1931, the House of Delegates also asked the Council to ascertain whether other countries discriminate against the graduates of American medical colleges. In connection with the revision of its book of Laws (Abstract) and Board Rulings Regulating the Practice of Medicine in The United States of America and Abroad, the Council has made an unusually complete analysis of the regulations of medical practice throughout the world. With the exception of Great Britain and Ireland, it is found that the nations of western Europe generally admit to practice only their own citizens, and in many of them the requirements for naturalization are difficult if not prohibitive. Inasmuch, however, as these laws apply equally to all foreigners, it cannot be said that there is discrimination against the citizens of the United States. In our own country there are nine states which make citizenship a prerequisite for licensure.

4. At the New Orleans Session, the House of Delegates urged that all possible assistance be given to small hospitals. The Council has, therefore, planned its inspection program so that approximately 25 per cent of the time will be spent in visiting small hospitals. But as there are nearly 7,000 registered hospitals in the country, not over 10 per cent can be seen in any one year.

5. A resolution was also adopted last year to the effect that as far as practicable the physicians on the staff of hospitals approved for intern training should be members in good standing of the American Medical Association. The Council has

carried out a study which shows that in 110 institutions thus far analyzed, with 9,933 physicians on their respective staffs, 66.4 per cent are Fellows and 20.6 per cent members of the American Medical Association.

II. Publications

6. (*a*) During the year the Council has contributed material for five special issues of THE JOURNAL dealing, respectively, with medical education, pathology, radiology, hospital service, and state board statistics.

(*b*) There has been published and distributed a handbook of useful information entitled Hospital Practice for Interns.

(*c*) The forty-second edition of Laws (Abstract) and Board Rulings Regulating the Practice of Medicine in The United States of America and Abroad has been issued. It has been completely revised and much new material added.

(*d*) The proceedings of the twenty-ninth Annual Congress on Medical Education and Licensure are being edited and will doubtless be ready for distribution before the Milwaukee Session.

The publications of the Council are increasingly in demand in public libraries and in government offices.

III. Medical Education and Licensure

7. (*a*) The Council has approved the Louisiana State University Medical Center.

(*b*) The Council has approved for graduate teaching the New York State Hospital for Incipient Tuberculosis at Raybrook.

(*c*) The period of probation of the School of Medicine of the University of Mississippi has been terminated and the name of the school omitted from the Council's approved list, with the proviso that other schools may accord full credit for work done to students actually enrolled on Feb. 12, 1933.

8. Because the Illinois College of Physicians and Surgeons, Chicago, in soliciting students, claimed to be a "Class A Medical College," a note of warning was sent to all colleges of liberal arts in the United States and Canada.

9. As an aid to medical schools, the Council has for many years compiled and published a list of approved colleges of arts, letters and sciences, and junior colleges. Since an identical list is now issued by the Office of Education in the United States Department of the Interior, the Council has discontinued its own compilation as no longer necessary.

10. The Essentials of an Acceptable Medical School, in collaboration with the Association of American Medical Colleges, has been revised and brought up to date. In its present form, it is submitted to the House of Delegates for approval (supplement A).

11. During the past ten years there has been a steadily increasing number of applicants for admission to medical schools. When it became evident that the schools of this country could not accommodate them all, they turned first to the universities of Canada, then to Great Britain, and finally to the continent of Europe. There is reason to believe that at present not less than two thousand American students are enrolled in the medical faculties of France, Germany, Austria, Switzerland and Italy. As foreigners, these students do not enjoy equal privileges with the natives of those countries in which they are studying, so that their anticipated return to the United States after graduation constitutes a serious problem for our licensing boards and for the medical profession. On the initiative of the Council, a number of informal conferences were held resulting in the adoption, by the Federation of State Medical Boards of the United States, of the following resolution:

1. That no American student matriculating in a European medical school subsequent to the academic year 1932-1933 will be admitted to any state medical licensing examination, who does not, before beginning such medical study, secure from a state board of medical examiners, or other competent state authority, a certificate endorsed by the Association of American Medical Colleges or the Council on Medical Education and Hospitals of the American Medical Association, showing that he has met the premedical educational requirements prescribed by the aforementioned associations.

2. That no student, either American or European, matriculating in a European medical school subsequent to the academic year 1932-1933 will be admitted to any state medical licensing examination, who does not present satisfactory evidence of premedical education equivalent to the requirements of the Association of American Medical Colleges, and the Council on Medical Education and Hospitals of the American Medical Association, and graduation from a European medical school after a medical course of at least four academic years, and submit evidence of having satisfactorily passed the examination to obtain a license to practice medicine in the country in which the medical school from which he is graduated is located.

It is expected that the enforcement of this regulation will exercise a wholesome restraint on the European migration of those less desirable students who fail to gain admission to approved schools in the United States and Canada.

For the purpose of maintaining contact with the representatives of European nations who may visit this country, a committee has been appointed representing the Federation of State Medical Boards of the United States, the New York Board of Regents, the Association of American Medical Colleges, the National Board of Medical Examiners and the Council.

12. Last year, the Council called attention to the fact that over a ten year period the number of medical graduates greatly exceeded the number of deaths in the medical profession. In the final report of the Commission on Medical Education it is shown that the ratio of physicians to population is twice as great in the United States as in England, France and Germany. Dr. Willard C. Rappleye, director of study of the commission, estimates that there is already a surplus of 25,000 physicians in this country, and he goes on to show by actuarial calculations that, with the present rate of production, the number of doctors will increase more rapidly than the general population. In spite of these conditions, there were last summer 12,280 young men and women who applied for admission to our medical schools, of whom 6,335 were accepted and actually matriculated. In the light of these facts it would seem desirable for the American Medical Association assiduously to inform the public that the profession is already overcrowded, to enlist the cooperation of college and high school faculties in placing before their pupils such information as will enable them intelligently to select a career, and to invite the active support of the Association of American Medical Colleges in bringing about a substantial reduction of their enrolment.

IV. Hospital Activities

13. (*a*) During the past year, 688 hospitals and other institutions have been visited by members of the Council's staff. From the Register the names of 241 hospitals have been dropped and 190 others added. In hospitals approved for intern training there has been a net loss of four.

(*b*) During the current year it is proposed to visit all hospitals applying for approval, all tuberculosis hospitals, all Negro hospitals, all institutions whose status is in doubt and, in addition, as many of the small hospitals as time will permit.

(*c*) Hospitals approved for internships or residencies are being urged to exercise the greatest care in the performance of necropsies. Stillbirths have been excluded in the calculation of the necropsy rate.

(*d*) Internships and residencies are being recorded in the Association's biographic files, after being edited by a member of the Council's staff.

(*e*) Occasionally, hospital reports indicate the presence of an intern who is not a graduate of an approval medical school, or a member of the visiting staff who is not a licensed physician. Such information is vigorously followed up.

14. The Essentials in a Hospital Approved for Residencies in Specialties is submitted for approval (supplement B).

15. In Ottawa, Ill., the osteopaths demanded the right to treat their patients in the Ryburn Hospital, which is a municipal institution. The medical staff, with the intelligent cooperation of the trustees and the city attorney, were successful in resisting the threatened invasion.

16. The Council has maintained its position that hospitals admitted to the Register should conform in their advertising to the Principles of Medical Ethics of the American Medical Association.

V. Pathology and Radiology

17. A special committee has been appointed to advise the Council regarding its classification of pathologists. This committee has recommended that two groups be distinguished: one composed of "physicians specializing in clinical pathology," the other of "physicians specializing in pathology." Appropriate definitions for these two groups are being formulated.

18. (*a*) In THE JOURNAL, Oct. 22, 1932, were printed the names of 538 physicians who at that time had qualified for approval as clinical pathologists.

(*b*) The Radiologic Number of THE JOURNAL, Feb. 11, 1933, contained the names of 1,187 physicians specializing in one or more of the branches of radiology.

Respectfully submitted.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS.
RAY LYMAN WILBUR, Chairman.
JAMES S. McLESTER.
EMMETT P. NORTH.
REGINALD FITZ.
MERRITTE W. IRELAND.
CHARLES E. HUMISTON.
FREDERIC A. WASHBURN.
WILLIAM D. CUTTER, Secretary.

SUPPLEMENT A

ESSENTIALS OF AN ACCEPTABLE MEDICAL SCHOOL

I. ORGANIZATION

A medical school should be incorporated as a non-profit institution. Its board of trustees should be composed of public spirited men or women having no financial interest in the operations of the school or its associated hospitals. The trustees should serve for fairly long and overlapping terms. If the choice of trustees is vested in any other body than the board itself, that fact should be clearly stated. Officers and faculty of the school should be appointed by the board.

II. FACULTY

The school should have a competent teaching staff, graded and organized by departments. Appointments should be based on thorough training, successful teaching experience, ability in research, and willingness to pursue an academic career. In the clinical departments this does not exclude men who are in the active practice of medicine and surgery. Nominations for faculty positions should originate in the faculty, usually being made by the dean in consultation with the department heads or a committee of the faculty. Reasonable security of tenure must be assured in order that the personnel of the faculty may have adequate stability. In the preclinical sciences the faculty should include at least ten qualified persons of professorial rank,[1] devoting their entire time to teaching and to that research without which they cannot well keep up with the rapid progress of medical science. For each twenty-five students in a class there should be at least one full-time assistant in each of the preclinical departments. Salaries should be sufficient to enable members of the faculty to support themselves and their families without the necessity of devoting time and energy to other occupations.

III. PLANT

The school should own, or enjoy the assured use of, modern fireproof buildings sufficient in size to provide lecture rooms, class laboratories, small laboratories for the members of the teaching staff and advanced students, administrative offices and a medical library. Equipment should be adequate, both for student use and for research. A trained librarian should be employed to supervise the operation and development of the library, which should include the more modern text and reference books with the QUARTERLY CUMULATIVE INDEX MEDICUS, the *Index Catalogue of the Library of the Surgeon-General's Office* and serviceable card indexes. The library should receive regularly all of the leading medical periodicals, the current numbers of which should be in racks or on tables easily accessible to the students. At the end of each year these periodicals should be bound and added to the files of bound periodicals.

There should be a medical museum having its various anatomic, embryologic, pathologic and other specimens carefully prepared, labeled and indexed so that they may be easily found and employed for teaching purposes. With each pathologic specimen coming from postmortems there should also be kept the record of the postmortem, the clinical history of the patient on whom the necropsy was held, and microscopic slides showing the minute structure of the disease shown in the gross specimen. The museum furnishes an excellent means of correlating the work of the department of pathology with that of the clinical departments.

There should be sufficient dissecting material to enable each student to dissect at least the lateral half of the human cadaver, to provide cross-sections and other demonstration material and to allow a thorough course for each senior in operative surgery on the cadaver.

For experimental laboratory work, as well as for medical research, a supply of animals is essential. Proper provision is necessary also for the housing and care of such animals. In any use made of animals every precaution should be taken to prevent suffering, and work by students should be carefully supervised.

Each school should have such useful auxiliary apparatus as stereopticons, reflectoscopes, microprojectors, carefully prepared charts, embryologic or other models, manikins, dummies for use in bandaging, roentgen-ray apparatus, and other aids to effective teaching.

IV. CLINICAL FACILITIES

The school may own or control a general hospital. By control is meant the unquestioned right to appoint the attending staff. In this event the students come into close and extended contact with patients under adequate supervision. In the event that a medical school depends for clinical teaching on an independent hospital, it is essential that the clinical teachers, either on nomination by the school or by agreement in conference between school and hospital, be appointed by the hospital trustees to appropriate positions on the hospital staff. Such hospitals should be in close proximity to the school and have a daily average of not less than 200 patients who can be utilized for clinical teaching, these patients to be of such character as to permit the students to see and study the common variety of surgical and medical cases as well as a fair number in each of the so-called specialties. In the use of this material, bedside and ward clinics should be developed for sections of from five to ten students; and patients in medicine, surgery and the specialties should be assigned to each student under a well supervised clinical clerk system. The treatment and care of these patients should be particularly observed and recorded by the student under the strict supervision of the intern, the resident or the attending staff of the hospital. The use of existing municipal or state hospitals for teaching purposes is also advised.

The school should also own or control ample hospital facilities for children's diseases, contagious diseases and nervous and mental diseases.

The school should own or control a well ordered dispensary or outpatient department with a daily average attendance of at least 100 patients (visits). Good histories and records of the patients should be kept and the material used in medical instruction. The attending staff should be drawn largely from the faculty, including those of highest rank.

At least fifteen maternity cases should be provided for each senior student, who should have actual charge of these cases under the supervision of the clinical instructor. A carefully prepared report of each case should be handed in by the student.

Facilities should be provided for at least fifty necropsies during each school session which are attended and participated in by students. These should be performed by the professor of pathology or a member of his staff. The material thus secured should be used in connection with clinical pathologic conferences.

V. RESOURCES

Experience has shown that modern medicine cannot be acceptably taught by a school which depends solely on the income from students' fees. No medical school, therefore, should expect to secure approval which does not have a substantial income in addition to students' fees. This statement carries double weight if the school finds it necessary to maintain its own teaching hospital.

VI. ADMINISTRATION

There should be careful and intelligent supervision of the entire school by the dean or other executive officer who, by training and experience, is fitted to interpret the prevailing

1. Professorial rank as here used includes professors, associate professors and assistant professors.

standards in medical education, and who is clothed with sufficient authority to carry them into effect.

There should be a good system of records showing conveniently and in detail the credentials, attendance, grades and accounts of the students, by means of which an exact knowledge can be obtained regarding each student's work. Records should also be kept showing readily the attendance of students at the teaching hospitals and dispensaries and the maternity and postmortem cases attended. The school should require that students be in actual attendance within the first week of each annual session and thereafter. Except for good cause, such as for illness, no credit should be given for any course when the attendance has been less than 80 per cent of the full time.

Requirements for Admission. The Council approves the statement regarding entrance requirements contained in the Constitution and By-Laws of the Association of American Medical Colleges, Section 4, page 11. (See Appendix.)

A list of colleges of arts and sciences approved by the various national and regional standardizing agencies has been prepared by the United States Department of the Interior in a pamphlet entitled "Accredited Higher Institutions." Colleges on this list are acceptable to the Council on Medical Education and Hospitals. Other colleges of known reputability may also be considered when the students present extra credits and exceptionally high grades.

Premedical college courses given in or by professional schools, or advanced years taken in high schools, will not be considered acceptable unless the student's credentials have been accepted by an accredited college of arts and science as meeting a part of the requirement for the bachelor's degree.

The admission of students to the medical school must be in the hands of a responsible committee or examiner whose records shall always be open for inspection. Documentary evidence of the student's preliminary education should be obtained and kept on file. When the medical school is an integral part of the university, this work usually devolves on the university examiner. Unless the university examiner and his records are closely accessible, however, some officer at the medical school should obtain and keep on file documentary evidence of each student's preliminary education, including both high school and collegiate work. The records must show especially that the required amount of work in the premedical sciences, including laboratory experiments, has been completed.

The number of students to whom an adequate medical education can be given by a college is related approximately to the laboratory and hospital facilities available and to the size and qualifications of the teaching staff. A close personal contact between students and members of the teaching staff results in an efficiency which is not possible in an institution where the number of students is excessive.

Advanced standing may be granted to students for work done in other acceptable medical schools, and in granting advanced standing there should be no discrimination against the school's full course students. Official verification of the student's previous medical work should be obtained by direct correspondence with the schools previously attended, and his preliminary qualifications should also be verified and recorded the same as for freshmen students.

Publications. The school should issue, at least annually, a bulletin setting forth the character of the work which it offers. Such announcement should contain a list of the members of the faculty with their respective qualifications. The courses available should be set forth by departments (anatomy, physiology, etc.) showing for each course its number, subject, content, character (lecture, recitation, laboratory or clinic), length of time, when, where and by whom given, and the amount of credit allowed. Information should be given regarding entrance requirements and tuition fees. The names of the students enrolled during the current or previous sessions should also be included.

VII. Curriculum

The Council approves the statement regarding the curriculum as contained in the Constitution and By-Laws of the Association of American Medical Colleges, Section 5, page 13. (See Appendix.)

Several of the medical schools now require an internship for graduation. Where it is not required it should be strongly urged and graduates should be assisted in securing internships in hospitals approved by the Council on Medical Education and Hospitals of the American Medical Association.

APPENDIX

From the Constitution and By-Laws of the Association of American Medical Colleges. (As amended Nov. 15, 1932.)

Sec. 4. Requirements for Admission. Admission to medical schools and medical colleges in membership in the Association may be by:

(1) Satisfactory completion of a minimum of collegiate instruction, as provided below in Subsection I; or by

(2) Examination, as provided in Subsection II.

Subsection I.[2] The minimum of collegiate credit required for entrance to medical schools and colleges in membership in the Association shall be not less than two full academic years, which shall include English, theoretical and practical courses in physics and biology, and in general and organic chemistry, completed in institutions approved by accrediting agencies acceptable to the Executive Council of the Association. Exception may be made under this section in that any member may admit applicants who have fulfilled the requirement in American and Canadian institutions not approved by such accrediting agencies, provided that all admissions so made be reported to the Executive Council and shall be published in the next Annual Report of the Council.

All collegiate instruction given in satisfaction of this requirement must be based on the same entrance requirements and must be of the same quality and standard of instruction as that required for a baccalaureate degree in the institution in which the candidate receives his preparation.

Subsection II. Admission to medical schools and medical colleges in the Association may be by examination.

Examinations for the purpose of admission by this method shall be conducted by institutions acceptable to the Executive Council of the Association, under the following conditions:

(*a*) Candidates who have completed two years of collegiate instruction and present evidence of general scholarship of high order, but who lack credits in not more than two of the required subjects, may be admitted on passing examinations in these subjects.

(*b*) Candidates who have completed three years of collegiate instruction and present evidence of having accomplished work of distinction in one or more fields of learning, but who lack credit in any or all of the required subjects, may be admitted on passing examinations in these subjects.

Sec. 5. Curriculum. The entire course of four years shall consist of from 3,600 to 4,400 hours, distributed as from 900 to 1,100 hours per year, and shall be grouped as set forth in the following schedule, each group to be allotted approximately the percentage of hours of the whole number of hours in the courses as stated.

1. Anatomy, including Embryology and Histology	14	—	18½ %
2. Physiology	4½	—	6 %
3. Biochemistry	3½	—	4½ %
4. Pathology, Bacteriology and Immunology	10	—	13 %
5. Pharmacology	4	—	5 %
6. Hygiene and Sanitation	3	—	4 %
7. General Medicine	20	—	26½ %
Neurology and Psychiatry			
Pediatrics			
Dermatology and Syphilis			
8. General Surgery	13½	—	17½ %
Orthopedic Surgery			
Urology			
Ophthalmology			
Otolaryngology			
Roentgenology			
9. Obstetrics and Gynecology	4	—	5 %
Total	76	—	100 %
Electives	24	—	0 %

2. Inasmuch as many schools have admission requirements differing from those given in this section, it is important that intending students of medicine, at an early date, inform themselves as to the exact requirements of that school in which they expect to matriculate.

When the teaching conditions demand it, a subject may be transferred from one division to another.

Sec. 6. Any medical school or medical college in membership in the Association may, with the consent of the Executive Council, conduct a six year combined collegiate and medical curriculum, provided conditions equivalent to those laid down in Sections 4 and 5 are fulfilled. The medical school must submit to the Executive Council of the Association, the proposed six year curriculum, giving the sequence of studies and the content of each course offered or any subsequent changes that may be contemplated before they go into effect.

April 1, 1933.

SUPPLEMENT B

ESSENTIALS IN A HOSPITAL APPROVED FOR RESIDENCIES IN SPECIALTIES

The training of residents in special branches of medicine or surgery represents advanced or postgraduate instruction for physicians whose ultimate aim is to prepare for the practice of a specialty. These residencies, therefore, may be regarded as recognized work toward specialization but not as sufficient preparation in themselves to qualify a physician as a specialist. For rating as a specialist, a physician should continue his studies in a recognized postgraduate school or department of a medical college. A list of qualified postgraduate institutions in the United States and elsewhere is available.

The term *residency* shall be restricted to definite periods of not less than twelve months' training, subsequent to internship.

I. Applicants for Residencies

Candidates for residencies should be selected from graduates of approved medical schools, who have served an internship in an approved hospital or who have had two or more years in practice.

II. Credit for Residency Training

As the postgraduate work of each physician is recorded in the biographic files maintained by the American Medical Association, it is incumbent that all hospitals approved for residencies in specialties make annual reports to this office.

Periods of service in hospitals approved by the Council for residencies in specialties are given full credit without further inquiry. Periods of service in unapproved hospitals are recorded as additional internships in general hospitals and as institutional experience in special hospitals.

Clinical Fellowships are distinguished from residencies as being extended periods of graduate study, under university control, which are provided for by endowment or other financial arrangement. They usually, though not always, involve the performance of original investigative work and frequently the fulfilment of definite requirements for advanced degrees.

Residencies are offered by hospitals in medicine, surgery and their subdivisions.

III. Eligibility

Registration.—Previous admission to the Hospital Register of the American Medical Association is essential.

Size.—The size of the hospital is not a primary consideration. The clinical material, however, should be sufficient to enable the resident to observe the principal manifestations of the disease, or diseases, he is studying.

Plant and Equipment.—The hospital buildings should be such as to assure the safety and comfort of the patients. There should be such equipment, appliances and apparatus as are commonly employed in the specialty in which training is offered and in the use of which the resident should become proficient.

IV. Staff

There must be an organized staff of ethical, licensed physicians holding the degree of doctor of medicine from acceptable medical schools. The particular specialties in which residents are being trained must be represented on the staff by well qualified, experienced and proficient physicians.

In general hospitals, the staff shall further provide a definite departmental organization in those branches of medicine in which residencies are offered. The chief of service in the department, either alone or as chairman of a residency committee in that department, shall assume direct responsibility for the training of the resident. He shall examine the qualifications of the candidates and form accurate conclusions as to the necessity for further training in the fundamentals. He shall surpervise such research as the residents may conduct. He shall stimulate others of his staff to give instruction and sympathetic cooperation which graduate students require during their hospital service.

It is expected that there shall be at least monthly clinical-pathologic conferences or other regular staff meetings at which histories and clinical observations in selected cases may be reviewed, particularly when the death of patients has necessitated special study including necropsy performance. In addition to meetings of the staff as a whole, it is desirable that departmental conferences be conducted in which the resident may take an active or even the principal part to the end that the character of the service given by that department to its patients may be recurringly evaluated.

V. Laboratories

Pathologic Service.—There must be a clinical laboratory equipped to perform routine and special tests in charge of a qualified pathologist. He shall be prepared to cooperate fully in the training of the residents and to supervise any direct contact which the resident has with the laboratory.

Residents in pathology must serve under a pathologist who is at least eligible for the Council's approved list of specialists in pathology. In addition, the department should provide apparatus, reagents or materials necessary to the operation of a modern pathologic laboratory.

Radiologic Service.—The roentgen-ray laboratory shall be under the direction of a qualified roentgenologist, proficient in the mechanical and interpretative functions of his specialty. He must likewise cooperate in all matters pertaining to the residencies which fall within the purview of his department. The department should contain roentgenologic, roentgenoscopic and, where required, therapeutic equipment.

Residents in roentgenology or radiology should serve under a specialist who is eligible for inclusion in the list of qualified roentgenologists as prepared by the Council. Te laboratory should contain complete diagnostic and therapeutic equipment.

VI. Necropsies

Thoroughness in postmortem performance should be emphasized. All hospitals desiring approval for the training of residents must examine post mortem 15 per cent or more of their fatal cases. The necropsy records should be complete, should be kept on file, and should include a summary of the clinical record.

Necropsies should be witnessed as often as possible by the resident. He may, with value, participate in their performance, in the writing of the protocols, and in preparing the final record in which appears a detailed description of both the gross and the microscopic observations.

VII. Medical Library

The hospital shall maintain, or provide ready access to, an adequate medical library.

VIII. Histories and Records

There must be complete histories, giving the patient's complaint, physical examination at time of admission to the hospital, preliminary diagnosis, laboratory observations, descriptions of operation, if any, daily record of case, final diagnosis, condition and date when discharged from hospital, end-results, and, in case of death, necropsy observations, if necropsy is performed.

The histories should show by signatures, or initials, all persons writing them or parts of them as well as the staff members by whom the histories are verified. Likewise, all orders and progress notes should be initialed or signed.

The records should be in charge of some competent person, preferably a trained record librarian. Alphabetical and diagnostic indexes of the patients should be maintained and the records filed so as to be readily accessible from either index.

IX. Work of the Resident

The resident's term of service should cover at least twelve months.

Aside from daily contact with patients and staff men, the assumption of responsibility is the most valuable aspect of a residency. As ability is demonstrated, an increasing amount

of reliance should be placed in the judgment of a resident both in diagnosis and in treatment. This essential strict supervision, however, should never be relaxed.

The resident should be encouraged to contribute to the effectiveness of hospital service by some investigative work. This may take the form of research in the hospital laboratories or wards, summaries of literature, or the preparation of statistical summaries and analyses derived from the hospital record department.

X. Resident-Intern Relationship

Those hospitals training both residents and interns should recognize their responsibility to both groups and not curtail too sharply the opportunities ordinarily given to interns by an excess of solicitude for the residents. The residents may, with profit, teach the interns, supervise their record work, and direct the treatments which interns administer. They should not, however, act so as to diminish the contact of the interns with the attending men nor assume the supervisory or disciplinary functions of the staff intern committee.

XI. Residencies in Special Hospitals

For educational purposes the Council will recognize not more than the first three years of service in a special hospital, notably those for psychiatric and tuberculous patients.

XII. Admission to the Approved List

Hospitals that conform to the foregoing standards are approved by the Council after an application has been filed and an inspection has been made by the members of its staff. Approval may be withdrawn whenever it appears that the institution no longer conforms to these Essentials, or when the residencies remain vacant for a period of two or more years.

Hospitals that wish to be approved for the training of residents should apply to the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago.

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

To the Members of the House of Delegates of the American Medical Association:

The Council on Scientific Assembly has held its usual meetings during the past year and has been chiefly concerned with the preparation of the scientific program.

A conference with the secretaries of the sections of the Scientific Assembly with the Council was held, Dec. 17, 1932.

A splendid program of clinical lectures has been arranged for Monday, June 12, and Tuesday, June 13.

The program of the Section on Miscellaneous Topics at the Milwaukee Session will be devoted to the general subject of anesthesia. Dr. A. H. Miller of Providence, R. I., will serve as chairman and Dr. John S. Lundy of Rochester, Minn., as secretary of this section.

No resolutions or memorials have been referred to this Council during the past year.

Assignment for Section Meetings at Milwaukee Session

MORNING	AFTERNOON
Practice of Medicine	Pediatrics
Obstetrics, Gynecology and Abdominal Surgery	Surgery, General and Abdominal
Laryngology, Otology and Rhinology	Ophthalmology
Pathology and Physiology	Pharmacology and Therapeutics
Orthopedic Surgery	Nervous and Mental Diseases
Urology	Dermatology and Syphilology
Preventive and Industrial Medicine and Public Health	Gastro-Enterology and Proctology
Miscellaneous Topics	Radiology

Respectfully submitted.

John E. Lane, Chairman.
Roger S. Morris.
Irvin Abell.
Frank Smithies.
Frank H. Lahey.
Dean Lewis, President-Elect.
Morris Fishbein, Editor, The Journal.
Olin West, Secretary.
} Ex officio.

CLINICAL LECTURES TO BE GIVEN AT THE MILWAUKEE SESSION

The clinical lecture program will be given in Plankinton Hall at the Milwaukee Auditorium. There will be lectures on Monday afternoon, June 12, and on Tuesday morning and afternoon, June 13.

The program will include the following lectures:

Monday, June 12—2 p. m.

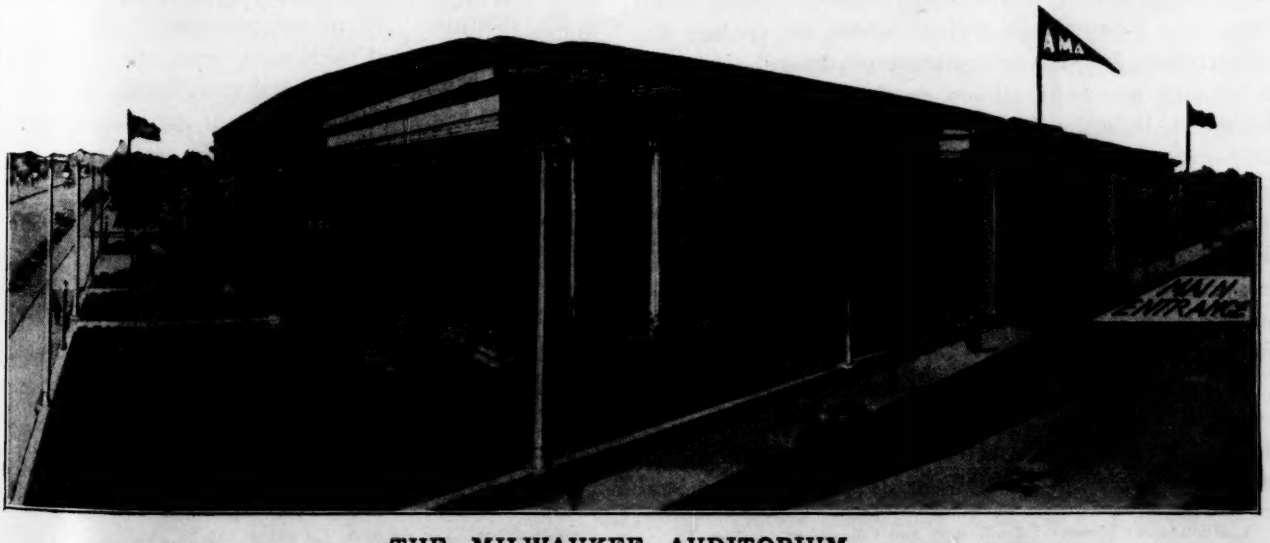
Nasal Sinusitis. L, W. Dean, St. Louis
Lymphogranuloma Inguinale. Harold N. Cole, Cleveland
Migraine. Peter Bassoe, Chicago

Tuesday, June 13—9:30 a. m.

Infectious Mononucleosis (Glandular Fever). Thomas P. Sprunt, Baltimore
Recent Progress in Thoracic Surgery. Carl A. Hedblom, Chicago
Diagnosis and Treatment of Injuries of the Head. Walter E. Dandy, Baltimore

Tuesday, June 13—2 p. m.

Clinical Control of Chronic Hemorrhagic States in Childhood. I. Newton Kugelmass, New York
Purpura and Pathologic Hemorrhage. Russell L. Haden, Cleveland
Clinical Interpretation of the Electrocardiogram. L. M. Hurxthal, Boston



THE MILWAUKEE AUDITORIUM

Headquarters of the Annual Meeting of the American Medical Association, June 12-16

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, MAY 6, 1933

ADAPTATION TO CLIMATE

Man's adaptation to climate plays an important part in the progress of civilization.[1] For example, climate seems rather naturally to make its own adaptation of the individual in the matter of exercise. As Williams [2] has pointed out, persons who live for any length of time in the South gradually develop a distaste for exertion of a physical kind. In the North there is quite naturally an inclination even in winter for vigorous outdoor life. Nature should be followed. The winter time is the most important time to carry on outdoor activities. Vigorous walking, outdoor games, skating and coasting are healthful sports. Limitations imposed by the weather cause people to live unhygienic lives during the winter. For many persons it is a period of semihibernation.

There is a widespread belief, promoted, it may be, by Huntington's essays, that the most stimulating quality of man's environment is a mean temperature between 38 and 64 F., with frequent fluctuations of moderate extent across this mean range. We are told that various phases of human social and economic development have proceeded with greatest rapidity and been most extensive in regions where the climate is characterized by such temperature conditions. Where it remains above 64 all, or nearly all, the time, or below 38, little development of humanity takes place unless the climate is possessed of great variability or storminess. Sufficiently wide and frequent changes in temperature, however, seem able to neutralize the depressive effects of heat on man. Unfortunately, the large land and population masses in the tropics and subtropics are handicapped by both heat and lack of variability.

A number of investigations have been undertaken to ascertain some of the reactions of experimental animals to prolonged extremes of environmental temperature and humidity. In the most recent of these studies, by Ogle and Mills,[3] at the University of Cincinnati, the investigators found that animals adapted to constant heat lose to a considerable degree their ability to produce heat and keep warm under chilling emergencies. Those adapted to a cooler environment are more able to meet chilling conditions by increased heat production but succumb to excessive heat much more readily than do those adapted to constant warmth.

The Cincinnati investigators regard the most interesting part of their observations as relating to the effects of temperature variability on metabolism. A few hours of cooling each day is shown to overcome the depressing influence of a hot environment. Animals spending two thirds of the time in the hot room but cooled a while each day are found to have more active combustion than even the cold room ones. Ogle and Mills believe that these differences in metabolism under the various conditions are mainly dependent on changes in suprarenal function, secondarily influencing the utilization of glycogen. Definite and certain proof for this, however, is not yet at hand. There are further implications drawn by Ogle and Mills. They remark that in certain of the most stimulating areas of the earth it seems evident that the climatic drive is exceeding man's bodily capacity to respond, with the result that in these regions metabolic breakdown is manifesting itself with increasing severity and frequency. The death rate from diabetes, for instance, is steadily rising in spite of the free use of insulin, while the increase in diseases of the heart and blood vessels gives real cause for alarm. Are we to believe that we may become victims of the climates that have heretofore been extolled as the most invigorating environments of man?

1. Huntington, Ellsworth: Civilization and Climate, ed. 3, Yale University Press, New Haven, 1925.
2. Williams, J. F.: Personal Hygiene Applied, ed. 2, Philadelphia, W. B. Saunders Company, 1925.
3. Ogle, Cordelia, and Mills, C. A.: Animal Adaptation to Environmental Temperature Conditions, Am. J. Physiol. **103**: 606 (March) 1933.

DISTURBANCES OF THE HEART AS INDICATION FOR SURGICAL INTERVENTION IN HYPERTHYROIDISM

The behavior of the heart in hyperthyroidism presents a number of interesting problems for the surgeon and the internist. Thyrotoxic damage to the heart muscle was recognized by Kocher years ago. Now it is quite generally accepted that thyroid hyperactivity is capable of producing disturbances of cardiac function ranging from relatively innocent tachycardia to grave myocardial damage. One third of all arrhythmias seen by him in Munich, according to F. Mueller, were thyrogenous. Romberg [1] assigns an important place to the thyrogenous factor in the etiology of arrhythmia. The action of thyroxine here is spent on the sinus area. Tachycardia of thyrogenous origin may assume the paroxysmal form.

Julius Bauer [2] said some years ago that sudden death in hyperthyroidism is frequently the result of transition

1. Romberg, Ernst: Lehrbuch der Krankheiten des Herzens und der Blutgefässe, Stuttgart, 1925.
2. Bauer, Julius: Innere Secretion: ihre Physiologie, Pathologie und Klinik, Berlin and Vienna, 1927.

of fibrillation from auricles to ventricles. Goodpasture,[3] Loos and other authors described myocardial changes in connection with thyrotoxicosis. Fatty degeneration, brown atrophy, round cell infiltration, fibrosis and myelomalacia have been described. Hirotoshi Hashimoto[4] succeeded in producing an experimental myocarditis of thyrogenous origin. That thyrotoxic patients die of heart failure, as a rule, was pointed out by Möbius in 1886 and was reemphasized by Romberg in 1925.

Characteristic of the thyrotoxic heart is its vigorous action. The apex beat is forceful and heaving or lifting. There is a diffuse precordial pulsation and throbbing of the abdominal aorta and of the carotids. The pulse is rapid and full. The patients complain of palpitations, pauses, extrasystoles and, in general, of unpleasant sensations in the region of the heart. In time, hypertrophy and dilatation of both chambers, especially of the left, can be established. There may be occasional extrasystoles or permanent arrhythmia due to auricular fibrillation. There may be nothing abnormal about the blood pressure, though the pulse pressure is frequently increased. The first sound at the apex is loud and prolonged. Frequently a systolic murmur may be heard with the first sound or may replace it (Borchard, Bauer, Romberg). Not infrequently a murmur is heard with the first aortic sound. These murmurs owe their existence to myocardial changes. Bauer detected not infrequently a presystolic rub characteristic of mitral stenosis. In the absence of a valvular lesion, the mechanism of this murmur is explainable on the basis of a relative narrowness of the ostium in the presence of a greatly dilated left auricle and beginning dilatation of the left ventricle. Still another factor may be interference with the conductivity of the bundle of His, for heart block has been observed in hyperthyroidism. The murmur heard with the first aortic sound can be explained on the basis of a change in the aortic tonus and is due to a relative narrowing of the aorta for the blood volume at a given moment. This is frequently confused with syphilitic aortitis.

Thus objective signs of disturbances of the heart and aorta are significant in the diagnosis and prognosis of hyperthyroidism. Even more important, they may constitute an indication for early operative intervention. A proper appreciation of the rôle of the heart in thyrotoxicosis is essential to recognition of certain obscure forms in which the manifestations, both as to time of appearance and the degree of intensity, belong to the cardiovascular system. Such forms have been abundantly described in literature as formes frustes by Charcot, atypical Basedow by Kocher, basedowoid types by Stern, prebasedow by Zondek, thyrogenous constitution by Bauer, and thyreocardiacs by Lahey. A Basedow heart may exist in the absence of the usual syndrome of thyrotoxicosis; the reverse is rare. Romberg, in his classic treatise, states that "atypical forms of Basedow disease are characterized most frequently by cardiac manifestations."

It seems to be generally agreed that the most efficient method of treating thyrotoxicosis today is by subtotal removal of the thyroid gland. Many leading surgeons favor surgical treatment in the presence of even mild cardiac signs if they are of thyrogenous origin. Attempts at control of these symptoms by roentgen irradiation or by iodine therapy is, as a rule, inefficient, while valuable time is wasted and pathologic changes in the cardiovascular system progress. The operative mortality need no longer act as a deterrent. Indeed, Pemberton[5] was able in 1923 to report a mortality of less than 1 per cent. Statistics from Kocher's clinic and from the Mayo Clinic give 86 per cent of satisfactory results after operations in serious cases of hyperthyroidism. In Bauer's opinion, grave thyrotoxicoses with signs of cardiac insufficiency, extreme emaciation and a profound nervous state offer a poor prognosis unless operation is prompt. The earlier the case is turned over to the surgeon, the less is the operative risk. Complete return to normal on the part of the heart is hardly to be expected if dilatation has taken place.

3. Goodpasture, E. W.: Myocardial Necrosis in Hyperthyroidism, J. A. M. A. **76**: 1545 (June 4) 1921.

4. Hashimoto, Hirotoshi, cited by Lucien, M.; Parisoti, J., and Richard, G.: La thyroide, Paris, 1925.

BACTERIOPHAGE THERAPY

The early hopes of bacteriophage therapy have hardly been realized. In spite of much experimentation, which has shown why bacteriophage could not function therapeutically, at least as a specific agent pitted against a specific infection, clinical observations have been accumulating which indicate that intravenous injection of bacteriophage may have beneficial effects.

The material labeled "bacteriophage" which the clinician injects into a patient with severe septicemia is obtained by first growing the particular bacterium on a broth medium and then introducing bacteriophage into the turbid culture. After further incubation the material becomes entirely clear, showing that the bacteria have been dissolved and killed by the bacteriophage, the concentration of which has increased sufficiently to cause bacterial disintegration.

Obviously, such a bacteriophage solution is not a simple solution or suspension of bacteriophage. It contains peptone, which was present in the original broth culture; and peptone, as is well known, will itself cause a nonspecific protein reaction on injection. The solution contains also all the bacterial proteins set free as a result of the lysis exerted by the bacteriophage. These bacterial elements are probably present in a far more soluble form than could be obtained by the most thorough thermal or other treatment, such as is used in killing a culture preparatory to its use as a vaccine.

5. Pemberton, J. deJ.: Mortality in Surgery of Exophthalmic Goiter, Surg., Gynec. & Obst. **36**: 458 (April) 1923.

These disintegrated cultures of bacteria may therefore be considered supervaccines containing all the chemical constituents of the bacteria. Now, whether the mechanism of bodily resistance to bacterial invasion is an allergic or an immunologic phenomenon, it is obvious that any benefit arising from the introduction of specific antigens would be enhanced by their presence in a more soluble and hence more available form. Larkum [1] more particularly has emphasized this idea and advocated, in general, the use of lysed bacterial cultures instead of the ordinary vaccine as being much more effective.

The original conception of bacteriophage as a benevolent organism attacking and destroying other pathogenic organisms stimulated the imagination. Though its use as a specific agent has been disappointing, it may yet yield important results by showing how more effective vaccines may be prepared. Moreover, from the theoretical side the ability to obtain thoroughly broken down bacteria may lead to more fruitful study of the essential though complicated chemical building stones that go to make up these minute living organisms.

1. Larkum, N. W.: J. Lab. & Clin. Med. **17**: 675 (April) 1932.

Current Comment

MAGIC IN THE FOOD FIELD

Belief in magic is still widespread among vast numbers of people. Even physicians, presumably scientifically trained, are not free from extraordinary and mystical notions, particularly in the fields of diet and allergy. To diet Dr. Mary Swartz Rose [1] pays special attention in a recent review of strange notions in this field, presented as an address before the American Dietetic Association. After paying her respects to the folly of fletcherization, she analyzes some of the views held by modern food faddists, including those who insist that combinations of acid fruits with meat or eggs will generate alcohol in the stomach, and that it is dangerous to mix proteins and starches. She points out that our daily bread and daily potatoes happen to be mixtures of this character. After all, facts are hampering for the faddist. Of late the notion that acidity must always be combated and dietary alkalinity promoted has been especially featured in the promulgations of the food cultists. Every time a new fact is discovered in the food field, some promoter exploits that fact for commercial gain. The mere emphasis by Prof. H. C. Sherman on the possibility of deficiencies in calcium in the American diet led to the exploitation of mineralized candy, with the argument that calcium deficiency was responsible for diabetes and cancer. Dr. Rose particularly complimented the work of the American Medical Association in exposing such notions. Thus, she said to the dietitians: "Make use of the information which can be obtained from the American Medical Association. Its reports, the results of seasoned judgment as to what may be legitimately said of these fakers, are most helpful." Today there are 2,500 members in the American Dietetic Association, presumably scientifically trained in good nutrition. Their cooperation with the medical profession in educating the public regarding the danger of belief in magic will be invaluable for advancement of public knowledge in the food field.

1. Rose, Mary Swartz: Belief in Magic, J. Am. Dietet. A. **8**: 489 (March) 1933.

PHYSICIANS NEEDED FOR CIVILIAN CONSERVATION CORPS—REFORESTATION CAMPS

Under the heading Government Services, in this issue of THE JOURNAL (page 1442), appears a statement relative to the development of suitable medical service for the reforestation camps to be established by the U. S. government as a part of its attempt to relieve the unemployment situation. At present, several hundred physicians are needed in this work. Applications are to be made directly to the commanders in various corps areas. The regulations under which the medical care of these employees of the government is to be conducted seem to afford a recognition of certain basic principles for which the medical profession has long contested; namely, the use of civilian hospitals in areas adjacent to the camps when hospitalization is necessary and the use of civilian physicians for medical work when the situation does not call for a full time employee of either the U. S. Army Medical Corps or the special medical corps to be developed for this new service. It is understood that President Roosevelt feels earnestly indeed the importance of achieving success in this venture as a part of the rehabilitation plan for the entire economic situation. No doubt, a sufficient number of physicians will apply for the positions available. Those interested should make their applications immediately to the commanders at the addresses listed in the item already referred to.

VIABLE AND NONVIABLE BACTERIAL DISSOCIATES

The failure of bacteria to multiply after exposure to physical or chemical antiseptics is not conclusive evidence of the "death" of these micro-organisms. Dr. F. L. Gates [1] of Harvard University alleges that exposure to borderline doses of ultraviolet radiation may destroy the multiplication potential long before the growth potential is seriously affected. After exposure to rapidly lethal irradiation, for example, the individual colon bacillus shows no subsequent increase in size and no cell division. The killed bacterium usually degenerates into an irregularly refractory "ghost." After borderline irradiation, however, exposed bacteria often increase in size but do not divide on reaching the normal adult stage. Long actively motile, highly refractory proptoplasmic filaments are formed, many of which eventually degenerate into nonviable "ghosts." In certain cases, however, a normal-looking bacillus may "pinch off" from one end of the giant filament and then multiply rapidly to normal colony formation.

1. Gates, F. L.: Science **77**: 350 (April 7) 1933.

This apparent "dissociation" of certain environmentally injured bacteria into viable and nonviable fragments may conceivably have a direct bearing on future theories of so-called bacterial pleomorphism.

Association News

MEDICAL BROADCAST FOR THE WEEK

American Medical Association Health Talks

The American Medical Association broadcasts on Tuesday and Thursday from 9:15 to 9:20 a. m., Chicago daylight saving time, which is one hour faster than central standard time, over Station WBBM (770 kilocycles, or 389.4 meters).

The subjects for the week are as follows:

May 9. Tonsils and Adenoids.
May 11. The Family Doctor.

There is also a fifteen minute talk sponsored by the Association on Saturday morning from 9:45 to 10 o'clock over Station WBBM.

The subject for the week is as follows:

May 13. Mothers.

ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

Twenty-Ninth Annual Meeting, held in Chicago, Feb. 13 and 14, 1933

(Continued from page 1345)

DR. CHARLES E. HUMISTON, Chicago, in the Chair

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

FEBRUARY 14—AFTERNOON

The Training of Technicians for the Clinical Laboratory

DR. WALTER M. SIMPSON, Dayton, Ohio: The ever-widening scope of laboratory investigation as an aid to clinical diagnosis and as a guiding influence in rational therapy makes it imperative that the individual laboratory worker be thoroughly capable of fulfilling the responsibilities placed on him. This statement applies equally to the physician who has chosen to specialize in the field of clinical pathology and to the lay person who works under his direction. Only those licensed physicians who have specialized in clinical pathology and its allied sciences for a period of three or more years are now recognized as possessing the qualifications for the directorship of a clinical laboratory. The importance of applying a similar degree of rigidity to the requirements for qualification as a capable laboratory technician has become more apparent. Since the confidence of medical men in the clinical laboratory depends on their belief in the moral integrity and technical ability of the laboratory workers, the members of the American Society of Clinical Pathologists have striven for years to elevate and standardize the training of laboratory technicians. In 1928 the society established a board of registry of technicians, composed of six members elected by the society. The objects of the registry are: (*a*) to maintain the minimum standards of educational and technical qualifications for various technical workers in the clinical research, public health and hospital laboratories; (*b*) to receive applications for registration and to issue a certificate of registration to those who meet these minimum standards; (*c*) to register schools and clinical laboratories which offer a course of laboratory training in accordance with the accepted standards proposed by this board; (*d*) to cultivate a high ethical standard among laboratory technicians in accordance with the Code of Ethics established by the American Society of Clinical Pathologists.

Applicants for certificates must have been graduated from an accredited high school or have received acceptable equivalent education. In addition, they must have successfully completed a year's course in college chemistry and biology, or an equivalent thereof, such as graduation from an approved training school for nurses, or they must have received credits in basic sciences, which in the opinion of the board are of equal value to the technician. Lastly, they must have successfully completed a minimum of twelve months of instruction in an approved school for technicians or an apprenticeship of at least one year under the guidance of a qualified clinical pathologist. Beginning April 1, 1933, all applicants to the registry must pass an examination conducted by a member of the American Society of Clinical Pathologists. The Code of Ethics of the American Society of Clinical Pathologists demands that all registrants must agree to work at all times under the supervision of a qualified physician and that they shall under no circumstances, on their own initiative, render written or oral diagnoses except so far as is self evident in the report, or advise physicians or others in the treatment of disease. Finally, the registrant must agree not to operate a laboratory independently, without the supervision of a qualified physician or clinical pathologist.

For outstanding service rendered in any of the branches of clinical pathology by research, teaching or other outstanding scientific endeavor, the board may grant to those worthy of special recognition the title of Medical Technologist.

Those schools and laboratories offering a course of instruction to prospective laboratory technicians must subscribe to the ethical requirements observed by individual physicians and medical organizations. Institutions which are not under the direct supervision of a recognized clinical pathologist or which lack an adequate teaching force, material or equipment, or which, in the opinion of the board of registry, resort to unethical advertising or charge unreasonably high fees are not approved by the board. At present, more than 1,300 qualified technicians are registered. The American Medical Association and the American College of Surgeons have endorsed the work and the aims of the registry by encouraging hospital administrators to urge their clinical laboratory technicians to seek certification by the registry. Many laboratory directors and hospital superintendents now consider as candidates only those applicants for laboratory positions who are certified by the board of registry. The standard of laboratory technical work would be greatly elevated, and many inadequately trained persons would be eliminated from this important field, if hospital administrators would insist on certification by the board of registry as the first requirement for consideration for such a position of trust. The board of registry also maintains a placement bureau for registered technicians and technologists at its headquarters in Denver.

The demand for technicians during the past few years has caused many inadequately trained persons to enter the field. This evil has been fostered by commercial schools, many of which offer short, inadequate courses at exorbitant tuition rates. Many of these schools depend for their existence on unscrupulous advertising and the lure of high salaries to their graduates. Medical journals that accept the advertisements of commercial schools which do not conform to the minimum standards established by the Board of Registry of the American Society of Clinical Pathologists must share the responsibility for a situation which seriously threatens the welfare of physician and patient. Only those advertisements should be accepted which carry a statement to the effect that the school is approved. The deleterious influence exerted by commercial schools in all branches of medicine is too well known to provoke further comment.

The logical places for instruction and practical training in the field of medical technology are the universities and the hospital laboratories of qualified clinical pathologists. The four-year combined courses offered at the University of Minnesota, the University of Kansas and Northwestern University provide an ideal background of broad basic training and practical experience to those who wish to make this field their life work. Other universities (about ten in number) offer special one and two year courses to those who satisfy certain prerequisites. The growing importance of this field should make it evident to the deans and faculties of American medical schools that a more or less uniform curriculum in medical technology should be offered in medical schools either as a two year course leading to a certificate or as a four year course leading to a degree of Bachelor of Science (in Medical Technology). The Council on Medical Education and Hos-

pitals of the American Medical Association has conducted surveys of clinical laboratories since 1924. The recent shift in emphasis from the laboratory as a hospital or private project to the director of the laboratory as an individual indicates recognition of the inevitable fact that personnel far transcends matériel. This applies to the laboratory technician or technologist as well as to the physician-director.

DISCUSSION

DR. J. J. MOORE, Chicago: The situation is so acute that technicians may be obtained to work in hospitals in the larger centers for their room and board. However, the study of the training of technicians should be considered because of the replacements of those who are leaving this profession. Large numbers of young people write for information regarding institutions where they can get training for laboratory work. They obtain it in pamphlets and letters sent out by the institutions that are primarily interested in making a profit from the candidates. They extol the career of a technician and always intimate that positions can be readily obtained as soon as they complete their course. There should be some control of these schools. The Board of Registry of the American Society of Clinical Pathologists has attempted to control them, but the attempt has not reached far because it has been during the last year only that they have given out a list of accepted schools. There should be a minimum of entrance educational requirements for those who enter the technician field. High school graduation plus one year of college or a nurse's training are not any too great. When one considers the responsibility placed on the technician, this individual must have good fundamental training. However, they vary. One who has only part of a high school education may make the best kind of laboratory technician, and a college graduate with a nurse's degree may never make a technician. They must be laboratory minded. The board of registration has 1,300 technicians registered. There are about 7,000 hospitals in the United States. I don't know how many of those are approved; say at least 5,000. The American College of Surgeons and the American Medical Association through the Council on Medical Education and Hospitals, when their inspectors go out, ask the technicians in the hospitals if they are registered, and recommend that they be registered if they are not. It will take five or ten years before all the technicians who are properly qualified will be registered. It has taken that long since the American Medical Association started to approve or qualify the pathologists. And all those who are qualified are not on the approved list yet. When it comes to approving the schools for training technicians, I think that work should be turned over to the Council on Medical Education and Hospitals, which has been working for a long time, as I understand it, in examining these schools. I think that both the American College of Surgeons and the American Medical Association should continue to support the Board of Registry of the American Society of Clinical Pathologists in the registration of these technicians. While the Council on Medical Education and Hospitals could approve the schools, the American Society of Clinical Pathologists could approve the technicians, and those who didn't graduate could be approved of because they took their training in the individual laboratories of the approved clinical pathologists, men and women not running schools, but training technicians, and these technicians would have the proper training.

DR. A. S. GIORDANO, South Bend, Ind.: Dr. Simpson's paper expresses the feeling of the American Society of Clinical Pathologists. We would be glad to follow Dr. Moore's suggestion to pass this on to the Council on Medical Education and Hospitals with our complete cooperation. I should like to emphasize the suggestion that the Council on Medical Education and Hospitals in its cooperation in this program go on record to prohibit the pages of the journals published under its control from having the freedom of advertising schools not accepted as qualified to teach technicians.

DR. NORBERT ENZER, Milwaukee: Over a period of six years, I have turned out a number of student technicians. It is not the fault of the clinical pathologists or of those looking for a career that there is a problem concerning clinical pathology. The physicians themselves have relegated this important department of medicine to so low a standard that they subject their patients to incompetence until the market is flooded with incompetent help. When physicians realize the importance of this work, we may begin to raise the standards for entrance into this field. Hospital administrators have been equally guilty of approving training of technicians in hospital clinics by those not qualified to train them. Hospital administrators have used for a long time the excuse of training technicians to cut down on the budget of the laboratory, and they have made use of these poor souls, giving them so-called free instruction, and then profited by their efforts in the laboratory. They have put them to the task of doing the menial jobs first until they have acquired a certain clerical dexterity, and after six months or a year they have been turned out as technicians. The great majority of them are not. Those of us in clinical pathology are aware of the inadequate technical features, let alone the interpretation of laboratory procedure. Who hasn't seen blood smears made in offices and hospitals that looked like thickly spread butter on bread? I lay the guilt for that situation on doctors themselves who have had so little regard for this work and to those who have incurred training in hospital laboratories not equipped to train technicians. Any training that is worth getting is worth being paid for. When there is an adequate, suitable, uniform tuition rate, the undesirables in this type of work will be weeded out. Those willing to pay for the education are generally the ones who turn out well. Those physicians who are about to employ technicians must first know what they want, what kind of work they have to perform. Technicians leave institutions well qualified in bacteriology, some in hematology, others in tissue work, but hopelessly inadequate for the type of work to be done in an office.

THOMAS G. HULL, PH.D., Chicago: Standardization can be carried too far. It is impossible to have a technician cover the whole field of medical laboratory work. Technicians should be asked "What specialty are you trained for?" and they should be made to stick to that specialty.

DR. WALTER M. SIMPSON, Dayton, Ohio: One point that has developed from the discussion is in regard to supervision of the technicians. The American Medical Association and the American College of Surgeons have stated that the technicians must be under the control of a pathologist or a physician, and it is in that last clause that I find a source of great difficulty about the country. I have found hospitals in which inadequately trained technicians, turning out erroneous and often disastrous reports, are under the control of a physician who has no interest in the field of clinical pathology, and the only reason for his assignment to that job is to cover the requirements. In that field, we as members of the American Medical Association and the members of the American College of Surgeons have contributed, unwittingly, perhaps, to a bad situation. There are towns in which the situation has obtained that one physician has been assigned to the directorship of the laboratory, and his only interest is that of obtaining a few dollars. He never goes to the laboratory. He does satisfy the requirements of the American College and the American Medical Association. But there have been available in the same town men who are adequately trained who have not been given the job that they should have. It all goes back to safeguarding the interests of the patient. That should be our goal.

The Need of Professionalization in Public Health

DR. JOHN A. FERRELL, New York: This article appears in full in this issue of THE JOURNAL.

DISCUSSION

DR. WALLER S. LEATHERS, Nashville, Tenn.: In this country we seem to lack uniformity in laws with reference to public health work, which I think is a grave defect. There are forty-eight states, and forty-seven of them have physicians serving as state health officers. One has a layman. I believe that is perhaps New Jersey. And of these states only thirty-eight have laws specifying that one who serves as a health officer must be a physician. The public health leadership of this country should in large measure be in the hands of the medical profession. I refer particularly to the health officers. It would be difficult for us to maintain the proper affiliation with the medical profession if we get too far away from the principle that one who is appointed to a position of responsibility in health work

shall be a graduate of medicine. Dr. Ferrell mentioned that there are 967 cities of 10,000 population or more, and of these 416 have full-time health officers, of which 265 are physicians and 151 are laymen. One health officer is a veterinarian, one is a dentist, one is a bacteriologist. That varied type of personnel seems to me to be quite illogical from the standpoint of meeting this responsibility in a scientific manner. There is great need of determining just those qualifications which one should possess who is appointed as a health officer. He also mentioned that of cities of 100,000 or more, of which there are ninety-three, twenty have part-time health officers and seventy-three have full-time health officers, and sixty-seven of the ninety-three are physicians and six are laymen, showing again a departure from the principle of recognizing leadership in this respect in the medical profession. There is great need for medical men who are interested in the future of public health to express their attitude and determine what we should have in this respect in developing health personnel in the future. There are 596 county health departments in this country, all of which have physicians in charge of the health work in those areas. The National Board of Medical Examiners is interested in this kind of problem. We are agreeable to discussing the matter with those interested, and, if practicable, work out some scheme of value in this particular in the United States.

Who Should Teach Physical Therapy?

DR. F. J. GAENSLEN, Madison, Wis.: It may be well if we as teachers consider treatment under the three heads of medicine, surgery and physical therapy, in order to keep in mind that there is a definite place for physical therapy in treatment. The foundation of instruction of the undergraduate in physical therapy should be laid in a didactic and practical course preferably in the third year. The didactic course can probably be adequately covered by one lecture a week during a single semester, while the clinical application can be covered in a practical course of perhaps double the period given to lectures. The general course must be comprehensive, including the consideration of every type of physical therapy. If there is lack of cooperation on the part of clinical instructors, the student is apt to get the idea that physical therapy is more or less of a fad. The student should learn that heliotherapy may spell the difference between arrest and recovery in bone and joint tuberculosis, that there is ample clinical evidence that ultraviolet radiation is a specific in rickets, and that it promotes the development of sound bones and teeth. He should learn the uses, therapeutic and diagnostic, of the galvanic and faradic currents in various forms of nerve injury. He should learn that massage and muscle training are of far more practical value in rehabilitation than electricity. While muscles will frequently respond to suitable currents, the response is confined practically to a single segment in the neuromuscular unit. The voluntary effort and resulting motion, however slight, exercises not only the muscle but the upper and lower motor neurons as well as the muscle fibers. The voluntary effort, however feeble, calls every portion of the neuromuscular apparatus into play. No opportunity should be lost in pointing out limitations to any type of physical therapy. A careful diagnosis is of first importance, the pathology of the part being constantly visualized.

When installation of a department of physical therapy is considered by a hospital staff, there is, I am sure, in the minds of most of those concerned a vision of expensive and complicated machinery, when as a matter of fact 90 per cent of the necessary work in a general hospital so far as physical therapy is concerned can be accomplished by exercises, massage, muscle training, and posture work with no other equipment than can be found in an ordinary home. The 10 per cent not covered by the foregoing will require the services of trained specialists, skilled in the use of ultraviolet radiation, in diathermy and in the roentgen ray and radium for high voltage therapy, a field that must be considered as distinctly apart from that suitable for the activity of the general practitioner. Only larger, well financed institutions with a well trained staff, including physical therapists, to assist in the carrying out of the program as determined by the physicians in charge, should strive for completeness in this field. Outside of this limited though important special field, the requirements for good work in general physical therapy may be met with a minimum of equipment, intelligently and widely used.

We are too apt to think of physical therapy in connection with injuries when as a matter of fact there is a large field for this branch of therapy in internal medicine and in general surgery as well as in the specialties. We are too apt to forget that the body as a whole suffers with the injury of the part and that attention to these facts will do much to shorten convalescence and reduce the burden incidental to invalidism. The student should be reminded constantly that while medicine and surgery alone supply the essentials in the majority of conditions, physical therapy should not be overlooked as an aid in expediting recovery. While the general principles and technic should be covered by the didactic and practical work in the department of physical therapy under the direction of the head of medicine or surgery, the indications as well as the limitations should be constantly pointed out by every member of the teaching staff as opportunity arises. Not until we have such cooperation will our full duty be performed and physical therapy reach the position in the art of healing which it deserves.

The Council on Physical Therapy of the American Medical Association: Its Problems and Its Progress

DR. HARRY E. MOCK, Chicago: The decade following the war witnessed an influx of physical therapy apparatus and the adoption of these new therapeutic agents by many of the profession. The simpler measures of massage, heat and exercise were forgotten and "machine therapy" was rapidly becoming the vogue. The sale of machines was not limited to the medical profession. Often, under different trade names, the same machine was sold to various cults, to beauty parlors, to athletic clubs and even to barber shops. Articles from the pens of faddists and enthusiasts both in and out of the profession began to flood the medical journals and other periodicals. Not satisfied with their triumphs thus far, these manufacturers began to advertise their machines directly to the public and many were the unwarranted therapeutic claims made for their use in every known disease. Dr. Joseph F. Smith of Wisconsin, realizing with many others of the profession this deplorable condition, brought a resolution before the House of Delegates of the American Medical Association in Atlantic City in May, 1925, urging the Board of Trustees to establish the Council on Physical Therapy. The resolution was adopted. The Council began to function in January 1926.

The Council early decided that the best means of controlling the advertising claims and sale of physical therapy apparatus was to publish after thorough investigation a list of apparatus "Acceptable to the Council" and a list of apparatus "Rejected by the Council." The Council has found it necessary to spend months and in a few instances years in the investigation of certain apparatus or in directing scientific studies of the therapeutic agency common to many machines manufactured by several different concerns.

There are two distinct types of physical therapy: first, that which must be administered by the physician or a trained technician, by the intelligent use of the hands and simple appliances plus the active cooperation of the patient; second, that which requires machines or special apparatus to administer. The chief physical therapy procedures in this first group are massage, heat, exercise, including muscle training and joint reeducation, a few simple mechanical appliances, and occupational therapy. The committees of the Council have made thorough studies of all these methods and have published reports concerning them. In spite of this fact, too many hospitals and too many physicians still think of physical therapy only in terms of "machine therapy." The Council wishes to emphasize again that approximately 90 per cent of the cases requiring physical therapy in the hands of the average practitioner fall in this group. The second group, or that form of physical therapy which requires special apparatus to administer, includes radiation, electrotherapeutics, the more complicated heat developing machines, inhalation therapy, which includes oxygen therapy, air purifiers, anesthetic machines and respirators, certain hydrotherapy equipment and similar apparatus for the administration of physical therapy.

The studies and investigations of the Council have proved that the majority of all these special appliances have definite therapeutic value. This fact should be recognized by the profession and these methods used when definitely indicated. The Council does feel, however, that the majority of these pro-

cedures belong in the hands of the specialist in physical therapy or require special training on the part of the physician before he can give adequate therapeutic value to the patient receiving these forms of treatment.

It is to this second large group of physical therapy modalities that the Council has been forced to devote a great deal of its time. It is in this group that a great many exaggerated therapeutic claims have been made, both by the profession and by manufacturers. It has been necessary to prove or disprove these claims scientifically before the majority of these machines or even the therapeutic modality could be approved and accepted. It is at once obvious that the great majority of these claims have not withstood controlled scientific experimentation. It is likewise obvious that no scientific method has as yet been evolved to prove certain therapeutic results which have been obtained by many clinicians with certain modalities. To evaluate properly all this material and to arrive at conclusions without inflicting serious hardships on certain manufacturers and without disrupting the advertising departments of many of our professional and lay journals has been a gigantic task. Many of these problems are still being wrestled with. In order to facilitate this angle of the work, special committees composed of Council members, often assisted by clinicians, physiologists, physicists and others who have been invited to contribute their services, have been formed.

The Committee on Radiation has dealt especially with ultraviolet radiation, x-rays, radium and radon, infra-red lamps, and all the various substitutes for window glass made for the purpose of transmitting the ultraviolet rays from sunlight. After approximately five years of clinical and scientific investigation, it was determined that the only conditions in which the Council could recognize real therapeutic value from ultraviolet radiation was in its prophylactic and curative effect on rickets, infantile tetany or spasmophilia and osteomalacia. General irradiation of the nude body of the expectant or nursing mother most probably has a definite preventive effect against rickets and other calcium deficiencies. Ultraviolet radiation may also exert a beneficial action on other disorders of calcium metabolism; but the limits of such action, the conditions under which it may be produced and the specific influence of the rays have not as yet been fully explored and specified. There is good clinical evidence that benefit is derived by patients suffering from tuberculosis of bones, joints, the intestine, larynx and lymph nodes, when exposed to natural sunlight or to rays emitted by certain artificial sources of radiation, but the precise rôle of ultraviolet rays in such action has not been clearly determined. As far as normal persons are concerned, the claim that exposure to ultraviolet rays increases or improves the tone of the tissues or of the body as a whole, stimulates metabolism or tends to prevent colds has not been conclusively substantiated. Certainly there is no evidence of these rays having any special beautifying effects. In certain dermatoses and cutaneous disorders, ultraviolet rays have a definite benefit.

Radium and radon have likewise been investigated and a report on this subject has been published. The Council has felt for some time that certain physicians and radium laboratories have not sufficiently controlled the rental of their products to physicians for use on their patients. It is hoped that, by educational methods or otherwise, certain of the inadequacies and dangers of advertising and renting radium and radon will be eliminated.

During the last seven years the Council has been investigating all kinds of diathermy machines and has made an extensive study of many of the therapeutic claims made for diathermy. In the case of so-called medical diathermy, the Council definitely agrees that this is an excellent method of producing heat and that this form of heat can be used to advantage in many conditions. It is convinced that this distribution of heat to a given area inside the body cannot be controlled to the extent that was formerly believed, owing to the action of the blood stream and other body influences on the distribution of heat. The Council therefore has been slow to accept therapeutic claims for medical diathermy other than those which can be accomplished by many simpler methods of administering heat. It may be necessary to change this attitude as further investigation progresses.

Electrosurgery, or surgical diathermy, has been investigated. The Council has taken the stand that the indications and uses of electrosurgery will best become known through clinical experience and scientific investigation on the part of the profession, rather than through high pressure advertising and so-called clinics held by manufacturers of these machines. Within the last year the Council has called the attention of the manufacturers of such machines to the inadvisability and nonnecessity of holding clinics for the advertising and sale of their electrosurgery machines. Outstanding men in the profession have already demonstrated that electrosurgery has its place in many malignant conditions of the skin, breast, cervix and even of the deeper glands and organs; in selected cases for tonsillectomy; in certain forms of rectal surgery, especially hemorrhoidectomy, and in a number of other conditions.

Through its committee on education, the Council has endeavored to develop methods of teaching physical therapy in both the undergraduate and the postgraduate courses to physicians. It has published reports setting forth minimum standards for courses in physical therapy both in medical schools and in courses given to technicians. The Council has furnished speakers to several county, district and state medical meetings for addresses on various subjects in physical therapy.

The Handbook of Physical Therapy, published by the American Medical Association two years ago, contains forty-eight articles and committee reports, which are of inestimable value as an educational medium to the profession.

The Council has had a fund, made available by the American Medical Association, for use in aid of research, bearing on physical therapy. By means of this, the Council has stimulated certain research studies which have been of real value to the Council in its work and to the profession as a whole. Application for a grant from the Council to be used in carrying out scientific investigations on problems of physical therapy may be made to the secretary of the Council on Physical Therapy of the American Medical Association.

This outline of the work of the Council on Physical Therapy illustrates a few of its problems and the progress it has made in the solution of some of these problems.

DISCUSSION

DR. E. W. RYERSON, Chicago: The work that the Council on Physical Therapy has been doing is amazing when one realizes all of the ramifications that surround it. It is almost too much to expect of a council, and yet it is one of the most valuable commissions that we can possibly conceive of. The great lesson to be learned from these two papers is that the simplest forms of physical therapy are, without exception, the best. What objections can there be to the use of physical therapy by all the hospitals? There is only one objection that I can see, and that is the expense, because this work must in every case be individual; to be of any value, it can be done only by the daily assiduous use of individual work. That is expensive, and what is needed in hospitals is sufficient endowment to allow this work to be done. It is evident that at present the facilities at any hospital cannot be enlarged. The simple things can be done in most cases by nurses who are trained under the supervision of a specialist in this line, and those can be taught later to the patient's relatives when he goes home. Years ago I went into several of the great foreign clinics where there were enormous rooms with machinery in them. They would strap a patient in and pull a switch. What is done to the patient? Nothing. Those mechanical things cannot be used without a brain behind them. In its last analysis, it is not the machinery that we use, but the brains.

DR. J. S. COULTER, Chicago: I should like to see Dr. Gaenslen's paper go to every member of every medical school faculty in the United States. He brought out that every teacher in the medical school should bring before his students the value of physical therapy. That is really the greatest problem that the Council on Physical Therapy has. I think that when we can get every physician educated to use these simple methods, physical therapy will be where it should be, and not until then.

DR. C. W. MUNGER, Valhalla, N. Y.: I should like to ask whether there have been any qualifications established for technicians.

DR. MOCK: There has been a set of standards for the education of technicians published. I want to say for the technicians

that the majority of them are greatly in advance of physicians. The technicians are doing a great deal toward educating the physicians.

DR. MUNGER: Should there be any different requirements for the treatment of poliomyelitis?

DR. MOCK: Technicians recognize that there are certain specialties. I think the treatment of poliomyelitis is one. The technicians have been excellently trained for the treatment of that condition. The medical profession owes what it has in physical therapy to Dr. Ireland. Its growth is largely due to the cooperation of Dr. Ireland when he was Surgeon General of the Army.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

State Medical Election.—Dr. James R. Garber, Birmingham, was chosen president of the Alabama Medical Association at its recent annual meeting in Montgomery, succeeding Dr. Samuel Kirkpatrick, Selma. Dr. Alvin B. Coxwell, Monroeville, was selected vice president, and Dr. Jacob U. Ray, Woodstock, treasurer. Birmingham was designated as the place for the 1934 session of the association. At the final session, an order was issued by the association for the curtailment of the state health department. This action, made necessary by insufficient funds, will result in the release of at least two thirds of the ninety-six employees, newspapers reported. Shortly before this order was given, a resolution had been adopted urging the governor and legislature to use "all reasonable ways and means to promote the welfare and continue the health work of its citizens through their health department." According to one report, all services of the department are to be discontinued except those embraced by police regulations, such as supervision of milk and water supplies of towns and cities. Those abandoned will include the tuberculosis clinics, nursing bureau and oral hygiene division. The order has already been put into effect.

COLORADO

Bill Enacted.—H. 335 has become a law, amending the nursing practice act so as (1) to require applicants for licenses to practice professional nursing to be graduates of accredited high schools and of approved training schools for nurses, requiring at least three years' training, and (2) to require all licentiates to pay an annual registration fee of $1.

Society News.—Dr. William A. Campbell, Jr., Colorado Springs, among others, addressed the Medical Society of the City and County of Denver, April 18, on "Carcinoma of the Breast with Metastasis, Including Metastasis to the Heart." The University of Colorado Medical School and Hospitals presented the program, April 4. Among others, Dr. Frank E. Rogers spoke on "Perforated Peptic Ulcer."——The Boulder County Medical Society was addressed, April 13, in Longmont, among others, by Drs. James A. Matlack, Longmont, on "Lesions of the Colon"; Myron W. Cooke, "Brain Abscess," and Clarence W. Bixler, Erie, "Lymphatic Leukemia."

CONNECTICUT

Bill Passed.—S. 259 has passed the house and the senate, permitting any practitioner of the healing art who has retired from active practice to resume practice if he notifies the state department of health in writing of his intention and pays the registration fee of $2.

Annual Meeting.—Dr. Wilder G. Penfield, clinical professor of neurology and neurosurgery, McGill University Faculty of Medicine, Montreal, was the guest speaker at the one hundred and forty-first annual meeting of the Hartford County Medical Association in Hartford, April 4. His subject was "The Evidence of a Cerebral Vascular Mechanism in Epilepsy." Other speakers were Drs. Walter L. Hogan and Henry F. Stoll on "Quinine Urea Anesthesia in Tonsillectomy" and "Relevancy of the Apparently Irrelevant," respectively.

FLORIDA

Bills Introduced.—S. 107 proposes to create a board of beauty culture examiners and to regulate the practice of beauty culture. Licentiates, apparently, are to be permitted to remove superfluous hair by electrolysis and by the use of devices and appliances of any kind or description, but not to use "light waves," commonly known as "rays." S. 263 proposes to repeal the law regulating the practice of optometry. H. 219, to amend the optometry practice act, proposes to define optometry as "the employment of any objective or subjective means or methods without drugs or surgery for the purpose of determining the reflective [sic] powers of the human eyes, or any visular [sic] or muscular anomalies of the human eye and its appendages, and the prescribing and the employment of lenses, prisms, ocular exercises for the correction, remedy or relief of any insufficiencies or abnormal conditions of the same." It proposes to make it unlawful for any person not licensed under the act to practice optometry as defined in the act, except that "duly qualified ophthalmologists" are to be permitted to do so. H. 221 proposes to make the incurable insanity or narcotic addiction of either spouse a cause for divorce. H. 270 proposes to make it unlawful for any practicing dentist "to use a dental hand piece (sometimes called a dental engine) or other tools or other instruments in the mouth of a patient without the same having been sterilized by boiling to a degree of 212 fahrenheit, for a period of sixty minutes, unless the same shall have been otherwise sterilized by a competent disinfectant." H. 534 proposes to authorize the state board of health to furnish insulin to indigent citizens of the state. H. 563 and S. 329 propose to repeal the laws regulating the possession and sale or other distribution of narcotic drugs and to enact the uniform narcotic drug act.

GEORGIA

Commemorate Discovery of Ether Anesthesia.—The observance of Crawford W. Long Day at the University of Georgia, March 30, marked the ninetieth anniversary of the discovery of ether anesthesia. Dr. Allen H. Bunce, Atlanta, gave an address on "The Practice of Medicine as a Career." The exercises at the university were dedicated to the memory of Dr. Long, a graduate of the institution.

Society News.—Dr. Hulett H. Askew gave a paper before the Fulton County Medical Society, Atlanta, March 16, on "Injection Treatment of Hemorrhoids." Dr. Benjamin T. Beasley gave a talk on "Interrelationship of the Female Sex Hormones in Functional Menstrual Disorders." Dr. Frank Lee Bivings, Atlanta, gave a paper before the society, March 2, on "Preconceptional and Prenatal Influences Affecting the New-Born," and Dr. John W. Turner, Atlanta, April 20, on acute intestinal obstruction.——Speakers before the Troup County Medical Society, February 23, were Drs. Milus K. Bailey, Atlanta, and Enoch Callaway, La Grange, on "Infections in the Kidney and Ureter" and "Removal of Tonsils in Tuberculous Children," respectively.

IDAHO

Society News.—Speakers before recent meetings of the Southside Medical Society at Burley and Twin Falls included Drs. Roger S. Anderson, Seattle, on fractures of the leg; Richard P. Howard, Pocatello, coronary occlusion; Corwin P. Groom, Pocatello, diagnosis of clinical myocarditis, and George C. Halley, Twin Falls, medical economics.

ILLINOIS

Luther E. Howell Sentenced.—After an investigation by the Department of Registration and Education, a warrant was issued against Luther E. Howell, Belleville, for practicing medicine without a license. At a hearing, April 10, Howell was fined $250 and sentenced to ninety days on the state penal farm at Vandalia.

Bills Introduced.—S. 520 proposes extensive amendments to the Illinois dental practice act. It exempts from the operation of the act "the rendering of dental relief in emergency cases in the practice of his profession by a physician or surgeon, licensed as such and registered under the laws of this state, unless he undertakes to reproduce or reproduces lost parts of the human teeth in the mouth or to restore or replace in the human mouth lost or missing teeth." S. 530 and H. 725 propose to impose on physicians annual license taxes amounting to 1.5 per cent of their gross incomes. S. 542 and S. 543 propose to create a board of naturopathic examiners and to regulate the practice of naturopathy. Naturopathy is defined as "the physiological and mechanical sciences such as mechanotherapy, articular manipulation, corrective orthopedic gymnastics, bacteriology, dietetics, neurotherapy, psychotherapy,

hydrotherapy, and Mineral Baths, electro-therapy, thermotherapy, phototherapy, chromotherapy, vibrotherapy, chiropractic, osteopathy, orificial surgery, obstetrics, napropathy, spondylopractic, thalmotherapy and Bio-chemistry which shall include the use of foods of such biochemical tissue-building products and cell salts as are found in the normal body; and the use of vegetal oils and dehydrated and pulverized fruits, flowers, seeds, barks, herbs, roots and vegetables, uncompounded and in their natural state."

Chicago

Dr. Ewing Gives Billings Lecture.—Dr. James Ewing, professor of oncology, Cornell University Medical College, and director, Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York, will deliver the second Frank Billings Lecture of the Thomas Lewis Gilmer Foundation of the Institute of Medicine of Chicago, May 26. Dr. Ewing's subject will be "The Depression: Its Effects on Medicine, Research and Practice."

Radiation Institute to Be Dedicated.—The dedication of the building and 1,000,000 volt transformer of the Mercy Hospital Institute of Radiation Therapy will take place, May 11. Addresses will be given by Rev. Robert M. Kelley, S.J., president, Loyola University; Dr. Jennings C. Litzenberg, University of Minnesota Medical School, Minneapolis; William D. Coolidge, D.Sc., director of research laboratory, General Electric Company, Schenectady, N. Y.; Dr. Herman L. Kretschmer, president, Chicago Medical Society, and Dr. Louis D. Moorhead, dean, Loyola University School of Medicine.

University News.—Medical students are to be admitted once a year beginning with the autumn quarter, 1933, according to the *News Bulletin* of the Division of Biological Sciences, University of Chicago. Heretofore, medical students have been admitted during each quarter.——More than $100,000 has been bequeathed to the University of Chicago for the treatment of crippled children, by the will of the late Mrs. Gertrude Dunn Hicks. In 1927, Mrs. Hicks gave the university $300,000 for the construction of the Gertrude Dunn Hicks Memorial Hospital for Crippled Children, in which fifty beds are available for children whose families are unable to provide medical care. It is planned to hold the principal of the recent gift in trust for ten years. The aggregate income then will be placed in trust to provide a fund for the operation of the hospital, the principal to become the property of the university outright.

INDIANA

University News.—A recent service report for 1932 showed that three Indiana University hospitals had 13,001 patients as compared with 12,189 the previous year. Of this number, 8,606 were bed patients and 4,393 were outpatients. The James Whitcomb Riley Hospital for Children led in numbers with 5,169 patients; the Robert W. Long Hospital was next with 4,159 and the William H. Coleman Hospital for Women, 3,673. Nine hundred and thirty-one births were recorded at the Coleman hospital during the year.

Society News.—Dr. Leon G. Zerfas, Indianapolis, spoke on pneumonia before the Madison County Medical Society in Anderson, February 20.——Dr. James D. Bisgard, Ann Arbor, spoke before the Elkhart County Medical Society, Elkhart, March 2, on "Arthritis of the Spine."——Dr. Melvin G. Yocum, Mentone, addressed the Kosciusko County Medical Society in Mentone, April 11, on "Forty Years in the Practice of Medicine."——At a meeting of the Marshall County Medical Society, Plymouth, April 5, Dr. Louis E. How, Lakeville, spoke on genetics.——The Hamilton County Medical Society was addressed at Sheridan, April 11, by Dr. Reuben A. Solomon, Indianapolis, on "Therapeutics of Cardiovascular Renal Disease."——Dr. Edward L. Cornell, Chicago, conducted a clinic on obstetrics before the Tippecanoe County Medical Society in La Fayette, April 13.——Dr. William P. Gillespie, Cincinnati, directed an obstetric seminar before the Wayne-Union County Medical Society in Richmond, April 13.——Dr. Homer H. Wheeler, Indianapolis, addressed the Hancock County Medical Society at Greenfield, March 10, on "Hemorrhoids and Their Treatment."——At a meeting of the Randolph County Medical Society in Winchester, March 13, Dr. Leland K. Phipps, Union City, spoke on "Tumors of the Genito-Urinary Tract."——Dr. Edgar F. Kiser, Indianapolis, discussed the senile heart before the Cass County Medical Society in Logansport, March 17.——"Congenital Syphilis" was the subject of an address given by Dr. Frank W. Cregor, Indianapolis, before the Bartholomew County Medical Society in Columbus, March 15.——Dr. Joseph C. Bloodgood, Baltimore, addressed the Lake County Medical Society in Hammond, April 27, on prevention and treatment of cancer.

IOWA

Society News.—A symposium on biliary tract disease constituted the meeting of the Crawford County Medical Society, February 14, in Denison; speakers were Drs. William D. Runyon, Sioux City, Herbert H. Davis, Omaha, and George M. Higgins, Ph.D., Rochester, Minn.——At a meeting of the Hamilton County Medical Society in Webster City, February 14, Dr. Guy B. Anderson, Ackley, gave a paper on "Office Treatment of Rectal Fissure."——The Wapello County Medical Society was addressed, February 21, by Dr. Carl G. Bishop, Ottumwa, on "Endocrine Disturbances Caused by Pathologic Conditions of the Body." Dr. Robert O. Hughes, Ottumwa, held a pediatric clinic at this meeting.——Dr. Arno B. Luckhardt, Chicago, addressed the Clinton County Medical Society, April 6, on "Recent Advances in Endocrinology."——Drs. Francis R. Holbrook and Harry A. Collins will address the Des Moines Academy of Medicine and the Polk County Medical Society, May 23, on the heart.——Dr. Richard L. Sutton, Kansas City, will conduct a skin clinic before the Linn County Medical Society, May 18; Dr. Sutton will also address the society on his trip through the arctic last summer.

LOUISIANA

Society News.—Dr. George F. McCleary, retired medical officer of the Ministry of Health, London, England, gave a public address at the Hutchinson Memorial Clinic, March 9, on "Trends in Medical Practice."——At a meeting of the Orleans Parish Medical Society, April 10, the speakers included Drs. Alfred A. Keller on "Surgical Parotitis with Report of a Case Complicating Tonsillectomy"; Roy E. de la Houssaye, "Diagnosis and Treatment of the Enlarged Thymus," and Michael E. DeBakey and William H. Gillentine, "A New Syringe Method for Blood Transfusion."—A recent meeting of the Tangipahoa Parish Medical Society was addressed by Dr. Joseph N. Roussel, New Orleans, on skin diseases.—Speakers before the Sixth District Medical Society in Baton Rouge, March 30, included Drs. Arthur A. Herold, Shreveport, on advances in the study of diabetes mellitus; James Q. Graves, Monroe, peritoneal adhesions, and Sidney C. Barrow, Shreveport, superficial radiation therapy.——At a joint meeting of the Orleans Parish Medical Society and the New Orleans Gynecological and Obstetrical Society, March 13, Dr. Martha M. Eliot, New Haven, Conn., spoke on infant mortality in New Orleans, and Dr. James R. McCord, Atlanta, Ga., New Orleans' maternal mortality.——The Seventh District Louisiana Medical Society heard discussions at its meeting, March 2, among others, by Drs. Seaborn J. Lewis, Beaumont, Texas, on endemic typhus fever in Louisiana and Texas, and George Herrmann, Galveston, current conceptions and treatment of heart disease.

MAINE

Society News.—Dr. Harold Rypins, Albany, N. Y., spoke before the Cumberland County Medical Society, February 24, on "Medical Legislation and Cult Recognition."——At a meeting of the Portland Medical Club, March 7, Dr. John R. Hamel gave an address on "Clinical Interpretations of Irregularities of the Heart Beat."

MARYLAND

State Medical Election.—At the annual meeting of the Medical and Chirurgical Faculty of Maryland, April 25-26, in Baltimore, the following officers were elected: Dr. George O. Sharrett, Cumberland, president, to succeed Dr. Joseph Albert Chatard next January; Drs. George C. Lockard, Baltimore; William R. White, Ellicott City, and John L. Riley, Snow Hill, vice presidents. Other officers of the faculty were reelected.

Another Full Time County Health Department.—With the appointment of Dr. David T. Bowden, Jr., as health officer, St. Mary's County began to function as a full time health unit in January. Caroline County is now the only part time health unit in the state. More than 840,000 of the 860,000 people living in the counties of Maryland, or 98 per cent of the total population of the counties, have such service, the state health department reported.

Industrial Hygiene Service.—A training school in industrial hygiene was inaugurated in Baltimore, February 28, as a joint project of the state commissioner of labor and statistics, Dr. J. Knox Insley, and the Baltimore Health Department. Lectures are being given over a two months period to the inspectors of both departments who will be engaged in the new work. The creation of a new classification of inspectors of industrial hygiene as a part of the personnel for the recently created bureau of environmental hygiene of the health department has been approved. Industrial establishments in

the city will be surveyed, and problems in industry, such as high relative humidities, proper ventilation and illumination, adequate removal of dusts, the need for protective devices, and the availability of sanitary facilities will be studied. The basis of the new service is chiefly educational, Baltimore *Health News* stated.

MASSACHUSETTS

Bill Enacted.—S. 386 has become a law, authorizing a physician registered as an intern to practice medicine, not only in the hospital or other institution designated on his certificate, but also outside of such hospital or institution, in the treatment of its patients, under the supervision of a duly registered physician serving as the medical officer of such hospital or institution and under regulations made by it.

Society News.—Dr. Ernest Granville Crabtree, Boston, was reelected president of the Massachusetts Society for Social Hygiene, April 10.——Dr. Martin E. Rehfuss, Philadelphia, will address the William Harvey Society of Tufts Medical School, May 12, on "Diseases of the Stomach." Dr. Ralph Pemberton, Philadelphia, and Dr. Robert B. Osgood, Boston, addressed the society, April 14, on "Control of Arthritis."

MICHIGAN

Personal.—Dr. Walter Johnston Cree, Detroit, was guest of honor at a luncheon, April 17, given by the Senior Club of the Wayne County Medical Society, in recognition of his completion of fifty years in the practice of medicine.——Dr. Floyd H. Lashmet, Ann Arbor, has been promoted to assistant professor of internal medicine at the University of Michigan School of Medicine, Ann Arbor. Dr. Franklin G. Lindemulder has resigned as instructor in neurology at the school, effective May 1; he will be succeeded by Dr. Robert Milligan.——Dr. Hugh Harrison has occupied the same office at 3505 East Forest Avenue, Detroit, since March 24, 1896, the *Bulletin* of the Wayne County Medical Society states.——Dr. Daniel J. O'Brien, Lapeer, was elected mayor of the city, April 5. Dr. O'Brien, who is 50 years old, is a graduate of Detroit College of Medicine and Surgery.

MISSISSIPPI

State Medical Meeting at Jackson, May 9-11.—The sixty-sixth annual session of the Mississippi State Medical Association will be held at the Robert E. Lee Hotel, Jackson, May 9-11, under the presidency of Dr. James M. Acker, Jr., Aberdeen. The program will include the following physicians as speakers:

Lucious W. Brock, McComb, Heart Disease: Incidence, Cause and Treatment of Some of the Common Types.
John H. Musser, New Orleans, Considerations of the Several Important Etiologic Types of Heart Disease.
Laurance J. Clark, Vicksburg, Prognosis in Coronary Disease.
Frank L. Van Alstine, Jackson, Urinary Antiseptics.
William A. Dearman, Gulfport, The Question of Prognosis.
Franklin G. Riley, Meridian, Asphyxia Neonatorum.
George Y. Gillespie, Jr., Greenwood, Neuronitis Complicating Pregnancy.
William L. Stallworth, Columbus, Climacteric Hypertension.
Leon J. Menville, New Orleans, The Early Diagnosis of Pulmonary Tuberculosis.
Henry G. McCormick, Laurel, Dermatophytosis of Extremities: Its Treatment by X-Ray Therapy.
J. Rice Williams, Houston, subject not announced.
Russell A. Hennessey, Memphis, Newer Methods in the Treatment of Prostatic Obstructions.
Andrew G. Payne, Greenville, Intestinal Obstruction.
Richard J. Field, Centreville, Treatment of Chronic Osteomyelitis with Live Maggots.
Wade H. Sutherland, Booneville, Chronic Peptic Ulcer.
Martin L. Flynt, Newton, Surgical Aspects of Obstetrics.
Homer A. Whittington, Natchez, Spinal Anesthesia.
William F. Hand, Jackson, Cervical Obstructions.
Monterville Q. Ewing, Armory, Carcinoma of the Colon.
Edley H. Jones, Vicksburg, Clinical Observations on Allergy from the Otolaryngological Viewpoint.
John R. Hume, New Orleans, Evaluation of the Symptoms of Chronic Aural Suppuration.
Lucien S. Gaudet, Natchez, Diagnosis and Treatment of Acute Sinusitis.
George E. Adkins, Jackson, Nasal Obstruction: Causes, Diagnosis and Treatment.
Daniel C. Montgomery, Greenville, Spontaneous Epistaxis.
Billy S. Guyton, Oxford, Tuberculous Iritis.
Ellis LeRoy Wilkins, Clarksdale, Acute Conjunctivitis: Diagnosis and Treatment.
Melbourne L. Batson, Jackson, Cataract: Senile and Traumatic.
Alvin E. Keller, Nashville, The Practicing Physician in the Control of Tuberculosis.
Harvey F. Garrison, Jr., Jackson, Use of Convalescent Serum in the Prevention and Attenuation of Measles.
Grover C. Terrell, Prentiss, Prevention of Heart Disease Due to Contagion.
Theodore W. Kemmerer, Jackson, Use of the Laboratory in the Prevention of Disease—A Discussion of the Factors Which Determine the Value of Laboratory Work.

Dr. Arthur C. Christie, Washington, D. C., will address a special session, Wednesday evening, on "Costs of Medical Care—Some Aspects of the Committee's Report." A round table discussion will follow this talk. Dr. William A. Evans, Chicago, will deliver the annual oration, Tuesday evening. The Mississippi State Hospital Association will hold its fourth annual meeting at the Edwards Hotel, Jackson, May 8. Dr. Bert W. Caldwell, Chicago, executive secretary, American Hospital Association, will be the speaker at the annual banquet.

MISSOURI

Bill Enacted.—H. 664 has become a law, making it lawful for licensed physicians to prescribe intoxicating liquors in such quantities and with such frequency and dosage as in their judgment the needs of their patients require.

Second Graduate Series.—The Kansas City General Hospital conducted its second graduate course, March 27-April 1. Medicine was the theme of the second series, while obstetrics formed the basis for the first, which began February 20.

University Opens Affiliated Unit.—The $2,000,000 Firmin Desloge Hospital, St. Louis, which opened its doors, February 3, is the newest addition to the group of institutions affiliated with the St. Louis University School of Medicine, according to the *Journal of the Missouri Medical Association.* It was made possible through bequests of the late Firmin Desloge and the Desloge family. The building is thirteen stories high with a bed capacity of 238. Not only will it serve as a training unit for the undergraduate student, but special facilities have been provided for graduate courses in all departments. A sliding scale of charges ranging from free patients to those in moderate circumstances will be used. Before admission, patients will be examined as to financial status in addition to the medical investigation. The hospital is operated by the Sisters of St. Mary in association with the school of medicine. Dr. Ralph A. Kinsella is chief of staff and director of the department of internal medicine at the Firmin Desloge Hospital.

NEBRASKA

Bill Enacted.—S. 126 has become a law, amending the medical practice act by removing the present three year time limit within which a licentiate who has allowed his license to lapse by failure to register annually must make application for reinstatement. It provides also that an applicant for a license by reciprocity may, in lieu of the evidence of actual practice now required, show that he has served an internship of one year in an accredited hospital.

NEW HAMPSHIRE

Bills Enacted.—The following bills have become laws: H. 286, amending the pharmacy practice act, by providing a penalty for maintaining a pharmacy, unless the owner is a registered pharmacist or employs a registered pharmacist to supervise it; H. 122, amending the chiropody practice act, by (1) defining a chiropodist as "one who examines, diagnoses, or treats medically, mechanically or surgically the ailments of the human foot, except the amputation of the toes or foot, or the use of anesthetics other than local," and (2) repealing the requirement in the present act that an applicant for a license have a high school education in addition to having been graduated by a recognized college of chiropody.

NEW JERSEY

Society News.—Dr. Seth A. Brumm, Philadelphia, addressed a combined meeting of the Camden County Medical Society and the Fourth Tri-Councilor District Medical Society, Camden, April 4, on "What of the Doctor's Economic Future?"——Dr. John A. Hartwell, New York, addressed the Bergen County Medical Society, Hackensack, April 11, on the reports of the Committee on the Costs of Medical Care.——Dr. Arthur C. Morgan, Philadelphia, discussed the reports of the Committee on the Costs of Medical Care before the Monmouth County Medical Society, Asbury Park, March 29.——The Ocean County Medical Society recently appointed a board to pass on the qualifications of specialists in accordance with the plan proposed by the Medical Society of New Jersey at its annual session in 1932.——At a meeting of the Passaic County Medical Society, April 13, physicians from the staff of Memorial Hospital, New York, presented the following program: Drs. Burton J. Lee, on "End-Results in Treatment of Carcinoma of the Breast"; Lloyd F. Craver, "Diagnosis and Treatment of Tumors of the Lymphoid System," and George T. Pack, "Diagnosis and Treatment of Carcinoma of the Stomach."

NEW YORK

Society News.—Dr. Nathan B. Van Etten, New York, addressed the Medical Society of the County of Monroe, Rochester, March 21, on medical economic questions.——Speakers at the April quarterly meeting of the Ontario County Medical Society at Clifton Springs Sanitarium were Drs. Adrian S. Taylor, Clifton Springs, on "Diseases of the Thyroid"; William C. Eikner, "Surgical Treatment of Prostatic Hypertrophy," and Walter S. Thomas, Clifton Springs, "Hormone Tests for Pregnancy."——Dr. Karl Winfield Ney, New York, addressed the Schenectady County Medical Society, in March, on "Epilepsy—A Mechanical Theory and Results of Treatment."——A symposium on physical therapy was presented at a meeting of the Medical Society of the County of Nassau, Mineola, April 25, by Drs. Richard Kovacs, Norman E. Titus and William Bierman, all of New York, and Harry E. Stewart, New Haven, Conn. Speakers at a meeting, March 28, were Alexander O. Gettler, Ph.D., New York, and Mr. Lloyd Paul Striker, former counsel of the Medical Society of the State of New York, on "The Diagnosis of Intoxication" and "A Professional Man in a Republic," respectively.——A symposium on intestinal obstruction was presented at a meeting of the Onondaga County Medical Society, Syracuse, March 7, by Drs. Albert G. Swift, Foster C. Rulison, Robert K. Brewer, Arthur B. Raffl, Percival K. Menzies and John C. Frey.

New York City

Lectures by Dr. Grant.—A series of lectures on heart disease will be given by Dr. Ronald T. Grant of University College Hospital Medical School, London, England, during the week of May 15. The schedule is as follows:

Monday, Correlation Between Clinical Diagnosis and Autopsy Findings in Heart Disease, at Bellevue Hospital Medical School.
Tuesday, Prognosis of Heart Disease, New York Academy of Medicine.
Wednesday, Arteriovenous Anastomoses in Human Skin, Beth Israel Hospital.
Thursday, Observations on the Coronary Vessels, College of Physicians and Surgeons, Columbia University.
Friday, Observations on Syphilitic Heart Disease, Cornell Medical College.

Society News.—The section on otolaryngology of the College of Physicians of Philadelphia met with the section on otolaryngology of the New York Academy of Medicine, April 17. Papers were presented by Drs. Ralph Almour, on "Evolution of the Mastoid Tip Cell"; Page O. Northington, "Functional Ear Examination in Patients with Ménière's Syndrome"; Isaac Seth Hirsch, "Diagnostic and Therapeutic Use of the Roentgen Ray in Laryngeal Neoplasms" and Paul Reznikoff, "Neutropenia." Drs. Oscar V. Batson, George M. Coates, Fielding O. Lewis and Karl M. Houser, Philadelphia, discussed the papers. Dr. Nathaniel G. Alcock, Iowa City, addressed the section on genito-urinary surgery, April 19, on transurethral prostatic resection and Dr. Edward L. Compere, Jr., Chicago, the section on orthopedic surgery, April 21, on "Calcium and Phosphorus Metabolism and Its Relation to the Parathyroid Glands."——Drs. John H. Wyckoff, Jr., Arthur C. De Graff and Clarence E. de la Chapelle presented a discussion of arteriosclerotic heart disease at a meeting of the Association of Italian Physicians in America, March 20.——Dr. William F. Braasch, Rochester, Minn., presented a paper on "Transplantation of the Ureters to the Sigmoid Colon for Exstrophy and Other Abnormalities of the Bladder and Urethra," before the New York Society of the American Urological Association, March 22.——Drs. Anthony Bassler and Albert F. R. Andresen addressed the Society for the Advancement of Gastro-Enterology, March 22, on "Pancreas and Angina Pectoris" and "Gastro-Intestinal Manifestations in Food Allergy," respectively.

NORTH CAROLINA

University News.—Dr. Thomas M. Rivers, New York, gave an address at Duke University School of Medicine, Durham, March 10, on "Filtrable Viruses in Relation to the Practice of Medicine," and Dr. Byrd C. Willis, Rocky Mount, March 14, on "Perforated Wounds of the Abdomen."

New Health Officers.—Appointments of new county health officers have recently been announced as follows: Drs. David E. Ford, New Bern, Beaufort County; Lester P. Martin, Mocksville, Davie County; Stephen Glenn Wilson, Clinton, Sampson County, reelected, and George E. Newby, Hertford, Perquimans County.

In Memory of Dr. Shore.—The state legislature recently ratified a resolution designating the building occupied by the state laboratory of hygiene in Raleigh as the Clarence A. Shore State Laboratory of Hygiene Building, in memory of the late Dr. Clarence A. Shore, director of the laboratory for twenty-five years. Dr. Shore died, February 10.

Bills Introduced.—H. 1240 proposes to make it a misdemeanor for any person, knowingly or through failure to exercise every possible care, to communicate a venereal disease. In prosecutions under the act, any licensed physician or any hospital consulted relative to diagnosis or treatment can be required to testify under oath regarding the case. H. 1284, to amend the workmen's compensation act, proposes to permit an employee injured in an industrial accident to select at his employer's expense a physician of his own choice.

OHIO

Plan for Admissions to Free Dispensaries.—The Cincinnati Academy of Medicine at a meeting, April 3, adopted a plan for controlling admission to free dispensaries. Each patient who applies to a free clinic for treatment will be sent to his family physician or, if he has no family physician, to a physician in his neighborhood, with a card. If the physician wishes to care for the patient, he will do so and return the card to the clinic. If not, he signs the card and sends the patient back to the clinic. It was said that the plan would be tried at the outpatient department of the Cincinnati General Hospital, where patients are said to be applying for aid at the rate of nearly 25,000 a year.

PENNSYLVANIA

Bill Introduced.—S. 1344, to amend the nursing practice act, proposes that any person of good moral character who has had twenty-five years or more of practice as a nurse shall be eligible for examination as a registered nurse.

Society News.—The R. W. Stewart Memorial Lecture of the Pittsburgh Academy of Medicine was delivered, April 21, by Dr. James Ewing, New York; his subject was "Recent Results of Cancer Research."——Drs. Samuel I. Lebeau and George V. Foster addressed the Pittsburgh Pediatric Society, April 14, on "Torsion of Tubo-Ovarian Pedicle in a Child of 5 Years" and "The Acute Abdomen in Childhood," respectively. Dr. Robert A. Knox, Washington, reported two cases of brain tumor.——Dr. Edward S. Thorpe, Jr., Philadelphia, addressed the Schuylkill County Medical Society, Pottsville, April 11, on "Simplified Infant Feeding and Management of Severe Diarrhea."——Dr. James F. Mitchell, Washington, D. C., addressed the Cambria County Medical Society, Johnstown, April 13, on duodenal ulcer.

Philadelphia

Hospital News.—Dr. Joseph Colt Bloodgood, Baltimore, addressed the staff of Jeanes Hospital, March 21, on "Physical Agents in the Surgical Treatment of Malignancy."——Ground was broken, February 22, for the new $2,500,000 naval hospital in Philadelphia, which is to cover 22 acres and will accommodate 800 patients.——Dr. Nathan F. Mossell, founder of the Frederick Douglass Memorial Hospital and medical director for more than twenty years, has been given two years' leave of absence. Dr. John Q. McDougald is in charge of the medical department of the hospital.

Care of Children with Heart Disease.—The Philadelphia County Medical Society in cooperation with the Philadelphia Heart Association has adopted a plan for examination of children with heart disease, which follows the general policy of strengthening the position of the family physician and discouraging general resort to hospital clinics for treatment. The procedure recommended includes the following points:

1. When a school child is found to have heart disease and expert opinion as to the cause, exact diagnosis or tolerance to physical exertion appears advisable, the school nurse will visit the home and advise the parents to consult the family physician.
2. If the parents state that the child will be taken to a physician, the nurse does nothing more except to urge action if there is delay.
3. If the parent refuses or neglects for as long as one month to send the child to a physician, the school medical inspector may, if he desires consultative opinion regarding the condition of the child's heart, including the amount of physical exertion that may be undertaken, secure that advice from a cardiac clinic. If the report of the clinic indicates that the child needs medical care, the nurse will again inform the parent of the latest report of the child's condition and urge the parent to seek the services of a physician.
4. Indigent children suffering from heart disease or any other disease may properly be referred to an appropriate hospital clinic for both diagnosis and treatment.

The special committee also recommended that the medical examiners at the junior employment offices of the board of education should have diagnostic assistance when it is requested, including the service of cardiac clinics. It was further recommended that physicians visit cardiac clinics and establish working relations with them and that the cardiac clinics provide definite fee schedules, moderate in amount, based on the capacity to pay and modified at the request of the family physician.

SOUTH CAROLINA

Personal.—Dr. Robert Wilson Ball, recently health officer of Horry County, has been appointed to that position in Richland County to succeed Dr. John B. Setzler, Columbia.——Dr. Joseph I. Waring, Charleston, was recently elected president of the South Carolina Pediatric Association.

State Medical Election.—Dr. William Egleston, Hartsville, was named president-elect of the South Carolina Medical Association at the annual meeting in Spartanburg, April 18. Dr. Robert E. Abell, Chester, was installed as president and Dr. Edgar A. Hines, Seneca, reelected secretary. Drs. Joseph T. Taylor, Adams Run, and Frank M. Lander, Williamston, were reelected to the board of medical examiners and Dr. John C. Caldwell, Chester, was elected as an additional member. It was decided to hold the 1934 session in Charleston.

Society News.—Drs. Robert Wilson, Kenneth M. Lynch and Hillyer Rudisill, Jr., Charleston, addressed the Orangeburg County Medical Society recently on rheumatic fever.——The annual meeting of the hospital associations of North and South Carolina and Virginia was held in Charleston, April 5-7. William T. Sanger, LL.D., Richmond, was elected president of the Virginia association; Dr. Hodge A. Newell, Henderson, of the North Carolina association and Mr. F. Oliver Bates, superintendent of Roper Hospital, Charleston, was reelected president of the South Carolina association.——Drs. Addison G. Brenizer and Watson S. Rankin, Charlotte, N. C., addressed the Spartanburg County Medical Society, Spartanburg, recently, on the report of the Committee on the Costs of Medical Care.

SOUTH DAKOTA

State Medical Meeting at Huron.—The fifty-second annual session of the South Dakota State Medical Association will be held in Huron, May 15-17, under the presidency of Dr. John R. Westaby, Madison. Dr. Melvin S. Henderson, Rochester, Minn., will conduct an orthopedic clinic, Tuesday morning, May 16, and Dr. Joseph C. Bloodgood, Baltimore, cancer clinics, Tuesday and Wednesday mornings. Speakers included on the program are:

Dr. Byrl R. Kirklin, Rochester, Minn., Less Commonly Recognized Lesions of the Gastro-Intestinal Tract.
T. W. Munce, D.V.M., Sioux City, Iowa, Tuberculosis of Animals and Man.
H. J. Boyts, live stock commissioner, Sioux City, Economic Importance of Eradication of Tuberculosis.
Dr. Charles K. Maytum, Rochester, Allergy.
Dr. Charles C. Higgins, Cleveland, Experimental Production of Urinary Calculi.
Dr. Henderson, Treatment of Tuberculosis of the Joints.
Dr. August E. Bostrom, state epidemiologist, and W. W. Towne, De Smet, sanitary engineer, Report of Typhoid Epidemic at Chamberlain.

Dr. Bloodgood and Dr. Augustus G. Pohlman, dean, University of South Dakota School of Medicine, Vermilion, will be the speakers at the annual banquet at the Marvin Hughitt Hotel, Tuesday evening, May 16. The South Dakota Academy of Ophthalmology and Otolaryngology will hold its annual meeting, May 16, in connection with the meeting of the state society.

TEXAS

Bill Passed.—H. 153 has passed the house and the senate, amending the law regulating maternity hospitals, by authorizing injunctions to restrain the operation of any maternity hospital which (1) is operating without a license, (2) is guilty of selling or trafficking in babies, (3) harbors persons of unsound mind or suffering from infectious or contagious diseases, except women suffering from venereal disease, or (4) is maintained for any purpose other than the sheltering of infant children or the reception, care and treatment of pregnant women.

Society News.—Physicians included on the program of the Texas Hospital Association at its annual meeting in Dallas, March 17-18, were Drs. Frank H. Shaw, Marlin; Bert W. Caldwell, Chicago, and Lucius R. Wilson, Galveston. Topics discussed included group hospitalization, public relations, nursing problems and hospital laws. Michael M. Davis, Ph.D., Chicago, spoke on "The Future of Hospitals in the Practice of Medicine."——Dr. Sanford R. Gifford, Chicago, recently conducted a clinic and lectured on glaucoma as the guest of the Dallas Eye, Ear, Nose and Throat Academy.——Drs. John G. McLaurin and Charles L. Martin, among others, addressed the Dallas County Medical Society, March 23, on "Significance of Lingual Tonsil Infection" and "Use of Newer Developments in Radiation Therapy of Cancer of the Breast," respectively.——The semiannual meeting of the Texas Surgical Society was held in Temple, April 17-18.——Drs. William B. Carrell and Herbert E. Hipps, Dallas, addressed the Wichita County Medical Society, February 15, on "Fractures of the Lower Third of the Leg" and Dr. William Rosenblatt, Wichita Falls, "Cerebrospinal Meningitis."——Dr. Robert B. Giles, Dallas, conducted a heart clinic and Dr. Curtice Rosser, Dallas, led a round table discussion on common rectal conditions at a meeting of the Brown County Medical Society, Brownwood, February 14.

WASHINGTON

New Quarantine Station.—The U. S. Public Health Service is about to build a new quarantine station for Puget Sound at Port Townsend, on a site donated to the government by the town, at a cost of $250,000. The station will include an executive building, employees' quarters and other structures.

Society News.—Drs. Jesse Ettelson and Francis B. Zener, Portland, Ore., addressed the Cowlitz County Medical Society, Longview, in March on "Practical Treatment of Common Skin Diseases" and "Treatment of Postpartum Complications," respectively.——Dr. James Tate Mason, Seattle, among others, addressed the Lewis County Medical Society, March 13, on "Gallbladder Ailments."——Prof. James R. Slater of the College of Puget Sound, Tacoma, addressed the Pierce County Medical Society, Tacoma, March 14, on "Modern Conceptions of the Biological Basis of Heredity."——Dr. Albert B. Murphy, among others, addressed the Snohomish County Medical Society, Everett, March 8, on "Diagnosis and Prognosis by the Newer Cytologic Examinations."——Dr. William V. Mullin, Cleveland, addressed the King County Medical Society, Seattle, April 17, on "Differential Diagnosis of Hoarseness." Drs. Frank J. Clancy and Cline F. Davidson spoke, May 1, on "Neuropsychiatry Applied to Urology" and "Sex and Internal Secretions," respectively.——Drs. Frederic G. Sprowl and George H. Anderson, Spokane, addressed the Walla Walla Valley Medical Society, Walla Walla, April 13, on "Newer Phases of Sinusitis" and "Pneumonia," respectively.

WISCONSIN

Bill Passed.—A. 459 has passed the assembly and the senate, proposing to require physicians to report to the state board of health the names of patients having cancer, carcinoma, sarcoma and other malignant growths.

Personal.—Dr. William Snow Miller, emeritus professor of anatomy, University of Wisconsin Medical School, Madison, was guest of honor at a banquet given by members of Phi Beta Pi, March 29, his seventy-fifth birthday.——The Winnebago County Medical Society held a meeting, March 30, in honor of Dr. Wilbur N. Linn, who celebrated his twenty-fifth anniversary in the practice of medicine in Oshkosh. Dr. John E. Guy, Milwaukee, addressed the society on "The Rôle of the General Practitioner in the Treatment of Asthma."——Dr. William H. Gunther, Sheboygan, was the guest of honor at a dinner given by his professional associates, February 20, in celebration of the fiftieth anniversary of his graduation from Rush Medical College, Chicago. He has spent his entire professional life in Sheboygan.——Dr. Philip A. Hoffmann, Campbellsport, recently celebrated his eightieth birthday. Three sons of Dr. Hoffmann became physicians. He is still in active practice.

GENERAL

Alpha Omega Alpha Lecture.—Dr. Charles F. Martin, dean, McGill University Faculty of Medicine, Montreal, will give the William W. Root Alpha Omega Alpha Lecture at the annual dinner during the session of the American Medical Association in Milwaukee, June 15.

American Heart Association to Meet in Milwaukee.—The ninth annual session of the American Heart Association, to be held in Milwaukee on June 13, will be devoted to a symposium on acute rheumatic fever and rheumatic heart disease. The meeting will be held in the Knickerbocker Hotel under the chairmanship of Dr. Walter W. Hamburger. The program includes papers on every aspect of the subject, including etiology, pathology, clinical manifestations, electrocardiographic studies and bacteriologic studies.

One Fatality on Railroads in 1932.—Railroads established a new safety record when only one passenger was killed in a train accident in 1932, the New York *Times* reports. This passenger was a railroad employee off duty, who was traveling in a motor passenger car when it collided with a train. The report stated that four passengers died in train accidents in 1931, the best previous year, while seven fatalities occurred in 1930. There was one fatality for every 149,807,000 passengers carried in 1931, and one for every 101,141,000 in 1930. The one passenger killed in 1932, compared with the 480,000,000 persons carried, is a new low average. A low record was also established for the number of passengers injured in train accidents, 410 in 1932 against 493 in 1931.

Societies Hold Sessions in Washington.—The American Association of Pathologists and Bacteriologists will hold its thirty-third annual meeting in Washington, D. C., May 9-10, at George Washington University School of Medicine. The American and Canadian Section of the International Association of Medical Museums will hold its twenty-sixth annual session at the medical school, May 8. Speakers at this meeting will include Pedro Ara, Madrid, Spain, on "Didactic Anatomical Technology"; N. S. Sahasrabudhe, Nagpur, India, "A Simplified Gelatin Method for Mounting Museum Specimens," and Dora Deng, Shanghai, China, "Primary Calcification of Muscle Fibers in the Heart." The twentieth annual meeting of the American Association of Immunologists will be held, May 9-10, at the medical school, and the twenty-sixth annual session of the American Association for Cancer Research at the same place, May 8.

Society News.—Dr. John H. J. Upham, dean, Ohio State University College of Medicine, Columbus, gave an address at the annual meeting of the American Association of Dental Schools in Chicago, April 21-23, on "A Medical Viewpoint of Dental Education." Other physicians on the program, all of whom are associated with dental colleges, included Drs. Hugh A. McGuigan, Chicago, "Teaching of Pharmacology in Relation to Its Practical Application"; Irwin A. H. Bottenhorn, Columbus, "Teaching Pathology in the Classroom, Laboratory and Clinic"; John L. Kendall, Chicago, "What a Practical Course in Materia Medica and Pharmacology for Dental Students Should Include"; Charles R. Turner, Philadelphia, "Theory and Practice: The Importance of Their Correlation in the Dental Curriculum"; William H. O. McGehee, New York, "Foundation Stones in Building a Logical and Effective Course in Diagnosis"; Edward H. Hatton, Chicago, "Training in Pathology as a Foundation for Teaching and Research in Dentistry," and William H. G. Logan, Chicago, "Utilization of the General Hospital in the Training of Dental Students."——The National Congress of Parents and Teachers will be held in Seattle, May 21-26. The convention theme is "The Child and His Community." One session will be devoted to "Community Standards Necessary to Meet Present Conditions of Health and Safety," following an address by Dr. Estella Ford Warner of the U. S. Public Health Service, on "Community Responsibility for Public Health."——Dr. Goyt O. Larson, LaPorte, was elected president of the Northern Tri-State Medical Association at its annual meeting in LaPorte, April 11, succeeding Dr. Edward B. Pedlow, Lima, Ohio. Dr. Edward P. Gillette, Toledo, was named vice president; Dr. Herbert E. Randall, Flint, Mich., secretary, and Dr. Glenn E. Jones, Lima, treasurer. The next annual session will be held in Flint.——The American Psychoanalytic Association will hold its annual spring meeting in Boston, May 31. Dr. Ernest E. Hadley, Washington, D. C., is secretary.——The thirty-seventh annual conference of the Association of Dairy, Food and Drug Officials will be held in Milwaukee, September 5-8. ——The tenth anniversary meeting of the American Society of Stomatologists was held in New York, April 27-28, at the Hotel McAlpin.

CANADA

Balfour Lectureship.—Dr. Alexander Primrose, formerly dean and professor of clinical surgery, University of Toronto Faculty of Medicine, Toronto, delivered the seventh annual Donald C. Balfour Lecture in Surgery at the university, April 5. Dr. Primrose's subject was "The Interrelation of Anatomy and Surgery." The day was the one hundred and sixth anniversary of the birth of Lister.

Bequest for Research.—The late Dr. Alexander S. Monro, Vancouver, B. C., former president of the Canadian Medical Association, who died, Aug. 12, 1932, bequeathed to the University of British Columbia a fund of $80,000 for medical research. The bequest will become available after the death of all beneficiaries of the will. Under the terms of the will a committee representing the university, the Vancouver Medical Association and the College of Physicians and Surgeons of British Columbia is to be formed to designate the nature of the research and persons to undertake it. This is said to be the first endowment fund ever left to the University of British Columbia.

CANAL ZONE

Officers Installed.—The Medical Association of the Isthmian Canal Zone at its January meeting installed the following officers: Col. Ernest R. Gentry, chief of medical service, Gorgas Hospital, Ancon, president; Dr. Dalferes P. Curry, assistant chief health officer, the Panama Canal, vice president, and Capt. Elbert DeCoursey, Ancon, secretary.

Government Services

PHYSICIANS NEEDED FOR CIVILIAN CONSERVATION CORPS—REFORESTATION CAMPS

As has been generally announced in the newspapers, President Roosevelt and Robert Fechner, Director of Emergency Conservation Work, have approved plans for the employment of 250,000 men in national forests. Present plans call for the immediate establishment of 538 conservation work camps in twelve Western states, using 107,000 men. In the Eastern region 10,000 men will be used. Corps area commanders of the United States Army will be responsible for all matters incident to the command of the units, the construction of the camps and their supply, administration, sanitation, medical care, hospitalization and welfare. Each camp will include approximately 200 men. The United States Army has drawn up tables of organization covering the control of such camps.

MEDICAL PERSONNEL

Medical personnel for these camps will be provided at the rate of one captain and two lieutenants of the Medical Officers' Reserve Corps for each thousand men. In cases in which civilian conservation corps units are widely dispersed, contract surgeons may be obtained on a part time basis at an average of $125 per month. In addition, two men for each company will be trained in the administration of first aid and in making physical and sanitary inspections.

HOSPITALIZATION

Hospitals will also be supplied for men in need of treatment because of illness or injury contracted in line of duty during this employment. Army, Navy and U. S. Public Health Service hospitals will be used if available in the vicinity of the camps, but if not available hospitalization will be arranged for in civilian hospitals. The U. S. Department of Labor has been assigned the task of enrolling the 250,000 men for forestry work. The men selected are sent to army stations, where they are given physical examinations.

MEDICAL SERVICES

The medical service to be provided to the men includes careful physical examination and vaccination against smallpox, typhoid-paratyphoid fever, as well as outpatient and hospital treatment. This new medical service will require that several hundred physicians now in civil life be brought into service either as reserve officers or as contract physicians.

APPLICATION FOR APPOINTMENT

The medical department of the U. S. Army, through Surgeon General Robert U. Patterson, is asking applications for these positions in order that competent medical men may be readily obtained by corps area commanders for this service. Officers of the Medical Reserve of the proper rank (captain or lieutenant) and other physicians desiring service with forestry camps or the army posts and camps engaged in reconditioning the men should make application to the commanding general of the corps area in which they reside.

CORPS AREA AND STATES INCLUDED IN EACH CORPS AREA

Following is a list of corps areas and the states included in each corps area:

First Corps Area.—Headquarters, Army Base, Boston 9, Mass. States included: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut.

Second Corps Area.—Headquarters, Governors Island, New York. States included: New Jersey, Delaware and New York.

Third Corps Area.—Headquarters, U. S. Postoffice and Court House, Baltimore, Md. States included: Pennsylvania, Maryland, Virginia and the District of Columbia.

Fourth Corps Area.—Headquarters, Fort McPherson, Georgia. States included: North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi and Louisiana.

Fifth Corps Area.—Headquarters, Fort Hayes, Columbus, Ohio. States included: Ohio, West Virginia, Indiana and Kentucky.

Sixth Corps Area.—Headquarters, 1819 West Pershing Road, Chicago, Ill. States included: Illinois, Michigan, Wisconsin, Post of Jefferson Barracks, Missouri, and Arcadia Target Range, Arcadia, Mo.

Seventh Corps Area.—Headquarters, Baird Building, Omaha, Neb. States included: Missouri, Kansas, Arkansas, Iowa, Nebraska, Minnesota, North Dakota and South Dakota.

Eighth Corps Area.—Headquarters, Fort Sam Houston, San Antonio, Texas. States included: Texas, Oklahoma, Colorado, New Mexico, Wyoming and parts of Arizona.

Ninth Corps Area.—Headquarters, Presidio of San Francisco, Calif. States included: Washington, Oregon, Idaho, Montana, Utah, Nevada, California and portion of Arizona.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 8, 1933.

The Drug Traffic

The annual report of the Central Narcotics Intelligence Bureau in Cairo for 1932 reveals the inner workings of the most important illicit drug organizations in the world. It was discovered that an agent in Tientsien, China, remitted during seven months of 1931 no less than $1,200,000 to the account of a group in Paris. Meanwhile the Berlin authorities arrested a suspected trafficker of American nationality, who they heard was coming from Constantinople. Papers found on him enabled 250 Kg. of morphine to be seized at Hamburg. They showed that he had relations with two drug manufacturers who formerly had factories in Paris and Constantinople, whence they had been expelled, and they also led to the arrest of another man, who was found to be an active link in the group in Paris. The confessions of one, who decided to retire from the business, enabled the bureau to piece together various scraps of information into a complete picture. Five years ago Paris was the drug traffickers' paradise. Only "licensed courtiers" were allowed to buy from the factories, but there were 325 of these, which shows how brisk was the business. The drugs were exported concealed in legitimate merchandise. In 1929 the French government stiffened its attitude to the drug trade, and in 1930 drug factories and brokers received notice to quit France excepting fifteen firms licensed to manufacture for the medical profession. Most of the others moved to Constantinople, but they were recently expelled by the Turkish government, and Bulgaria is now the chief center for illicit drug manufacture. The ground on which drug traffickers can operate in Europe is becoming smaller and smaller. The danger for the future seems to lie in the Far East. Japanese chemists have been competing with the European purveyors to such an extent that they have sent down the price of diacetylmorphine in China from $600 to $300 per kilogram. Of late the Chinese have been manufacturing an inferior kind, which sells at $175. Unless action is taken to stop it, the Far Eastern factories will soon be supplying the illicit demands of Europe and America.

The London County Council and Hospital Consultants

The whole of the municipal hospitals of London have recently come under the administration of the London County Council. These hospitals, in addition to their regular staffs, require the services of various classes of consultants and specialists, who work on a part time basis. The council decided to reorganize the service and formulated a new scheme. The consultants, knowing what was impending, formed a committee to consult with the council on the project and drew up a memorandum, which was submitted to the council. But the council declined any such cooperation and a dispute of the first magnitude arose. The British Medical Association supported the consultants, who passed resolutions deploring the action of the council in formulating a scheme without affording the consultants an opportunity of discussing the proposals before adoption. The health officer of the council, Sir Frederick Menzies, has replied with a statement in the *British Medical Journal*. As far back as 1931 he appointed a departmental committee of his own staff to make representations to him as to the best method of obtaining consultants and specialists for the council's hospital service. This committee consisted of the principal medical officers attached to the central administrative staff and medical superintendents of the general and special hospitals. After much consideration, two reports were drafted—one dealing with general principles, the substance of which was communicated to the medical secretary of the British Medical Association, the other a detailed scheme in the form required by the council. Later the health officer gave the medical secretary an interview, but it was impossible for him to communicate the details of a report which had not yet been submitted to the council. Still later the health officer received a deputation of the consultants and specialists, when he pointed out that he must be the person to advise the council on the suitability of applicants. A committee of consultants to advise him on the arrangements was suggested. He said that he would appreciate such advice but did not bind himself to consult a committee of any particular personnel. The report of the health officer, with certain modifications, was passed by the council. The difference between the council, on the one hand, and the consultants and the British Medical Association, on the other, is mainly one of principle—refusal to discuss with the consultants their objections to various points in the scheme.

International Postgraduate Courses for Nurses

The British Red Cross Society has undertaken to provide a scholarship of $1,250 to assist in establishing the International Florence Nightingale Foundation. Three similar scholarships will be financed by the National Council of Nurses in Great Britain, the Nightingale Fellowship at St. Thomas's Hospital, the London Hospital Nurses' League, Guy's Hospital Nurses' League and King's College Hospital Nurses' League. The object is to establish on a permanent basis international postgraduate courses for nurses. It is hoped that a national Florence Nightingale committee will in due course be set up in every country in which the Red Cross operates to raise funds for the endowment scheme. The League of Red Cross Societies, with headquarters in Paris, has made provision for five scholarships to be awarded to Red Cross nurses on the recommendation of their national Red Cross societies, and a half scholarship has been promised by the Red Cross Society of Czechoslovakia.

PARIS

(From Our Regular Correspondent)

March 22, 1933.

Calmette's Use of B C G Vaccine for Nonallergic Adults

In his previous communications, Calmette has always emphasized that his antituberculous vaccine has only prophylactic value, which is effective only in persons free of all previous tuberculous infection. That is why he recommended at first that the B C G vaccine be used only in the new-born within the first ten days following birth, at which time the intestinal mucosa is not yet differentiated and the immunizing elements can pass directly into the lymphatic system, at a time when the child is not yet a carrier of tubercle bacilli. Others, however, have experimented with the B C G vaccine applied to older children. They have observed the rule to apply it only to persons who do not react to tuberculin. They have secured excellent results by using the subcutaneous route. Mr. Calmette has given his approval to this practice, and, in a recent communication addressed to the Academy of Medicine, he recommended a more general use of the vaccine. In France, 97 per cent of the adults react to tuberculin and are no longer susceptible to vaccination against tuberculosis, because they have already been inoculated with virulent bacilli. But, Calmette said, that situation does not exist in countries with a sparse population, such as Sweden and Norway, nor in countries in which tuberculous infection is just beginning to spread, such as French Equatorial Africa, western Canada and Greenland. Even in France, in dealing with children aged 2-5 and with children of school age, from 65 to 70 per cent of whom

are not yet allergic, tuberculous premunization appears to be practical. All observers have recognized that, after the inoculation of nonallergic children with the B C G vaccine, most of the children become allergic soon afterward. Calmette has sought recently to ascertain whether it is really necessary to administer the vaccine by means of injections, and whether absorption of the vaccine by the oral route might not produce the same effects. He experimented along this line through the Institut Pasteur in Brazzaville, French Equatorial Africa, where the majority of the native population is still nonallergic. The vaccine was given to 149 children at the school for boys and the school for girls in Brazzaville. When it was administered orally, 55 per cent of the children reacted, three months later, to tuberculin. To the children who did not react to tuberculin another dose of vaccine was given, and 10 per cent of them reacted to tuberculin at the end of three months. At the end of six months, 65.8 per cent of the persons vaccinated by the oral route had manifested an immunity. This method of protection can therefore be applied to all nonallergic children of school age in any country, and even to adults, provided they are not allergic. The vaccine was given to adults at the Ulleval Hospital school at Oslo, where two thirds of the pupil nurses were on admission allergic. The vaccinated group showed later 2.60 per cent of tuberculous morbidity, and the unvaccinated group, 26.9 per cent. It was decided henceforth to vaccinate on admission all the nonallergic pupils by means of the subcutaneous injection. The nonallergic pupils yield now only 2.80 per cent of benign tuberculous morbidity. The allergic pupils (and hence not vaccinated) furnished 25 per cent of tuberculous patients more or less gravely affected. Calmette, referring to the statistics published in the United States on tuberculous morbidity in students of medicine, recommended that, before admission, all students matriculating for the first time be subjected to a tuberculin skin test and that all nonallergic applicants be vaccinated against tuberculosis.

Medical Practice Limited to French Physicians

The Armbruster bill, which bears on the regulation of the practice of medicine in France, has finally been adopted by parliament, after having been sent back and forth several times between the chamber of deputies and the senate. The law is still incomplete as regards the organization of medical studies proper. The passage of the bill was expedited because many desired to see applied, as soon as possible, the provision designed to prevent foreign students from practicing medicine in France after securing their state diploma. These students, who have come mostly from eastern Europe, have become almost as numerous as the French students. There are already too many physicians in France, and most of them, particularly in the cities, are no longer able to earn respectable livings. Henceforth, the practice of medicine in France will be reserved to Frenchmen, with a few rare exceptions made in favor of citizens of Rumania, which accepts the French diploma. Furthermore, enrolment in the French faculties of medicine will now be confined to students who have secured a diploma from a secondary school under the same conditions as freshmen, which regulation is designed to restrict the admission of persons recently naturalized. The senate thought to take advantage of this opportunity to impose on future students of medicine the requirement of a bachelor's degree covering a knowledge of Greek and Latin. Since 1902, the universities have created a dozen different types of baccalaureate degrees, some of which cover only instruction in French, a modern language and sciences, and exclude the two classic dead languages, and these diplomas had been declared sufficient for admission to faculties of medicine. But the professors of the faculties of medicine have not ceased to protest against this letting down of the bars. Medical students who are not acquainted with Greek and Latin, they contend, will soon reveal a regrettable lack of general culture and likewise a less complete comprehension of biologic studies, not to speak of their lack of understanding of scientific terms, which, for the most part, are derived from Greek and Latin. A strong movement developed within the medical profession itself in favor of reestablishing the requirement of a knowledge of these two languages on the part of students of medicine. This principle the senate desired to endorse in the elaboration of the new law, but the chamber of deputies, in which the socialist bloc always shows itself hostile to the formation of élite bodies of high culture, refused its assent. The senate finally yielded, on receiving assurances from the minister of public instruction that this requirement would be set up in another bill now in course of preparation. This postponement, however, is displeasing to physicians who advocate making classical studies compulsory.

Death of Professor Hutinel

Professor Hutinel has died at the age of 84. Just two weeks ago, he lost his only son, Dr. Jean Hutinel, associate professor and physician to the *hôpitaux de Paris*, at the age of 42. His only other son he had lost during the war. Sorrow appears to have hastened the death of this sturdy scientist. As professor of the Clinique infantile, at the Faculté de médecine de Paris, he had long been the head of French pediatricians and helped to train many pupils. There is scarcely a disease of childhood on which he had not published important researches.

BUENOS AIRES

(From Our Regular Correspondent)

March 1, 1933.

Diets in Argentine Hospitals

Reforms have been proposed in the Municipal Hospitals of Buenos Aires, following plans presented by Drs. Escudero and Navarro for the regulation of diets in hospitals. Dr. Navarro's plan is already established in the Ramos Mejía Hospital. Dr. Escudero says there is no uniformity in the types of foods and their preparation in the hospitals. The daily average diet per patient is as follows: carbohydrates, 325 Gm.; proteins, 123 Gm.; fats, 83 Gm.; calcium, 1.5 Gm.; phosphorus, 1.85 Gm., and iron, 18 mg., which amounted to 2,540 calories and which represented a cost of 0.63 to 0.67 pesos (about $0.17). The diet contains 1 liter of milk per person. He advises the elimination of some preserved food, such as codfish and preserved vegetables. He advises the use of fresh vegetables and fruits, the use of lard and milk as sources of fats, the use of diets containing proteins, 127 Gm., that is, 1.8 Gm. per kilogram of body weight, of which 65 per cent should be of animal source and 35 per cent of a vegetable origin; he advises the elimination of liver, kidneys and viscera used in the diet. This advice is based on economic reasons, without regard to the nutritional value of those constituents of the diet. The diet of the hospitals would be divided into "general" diet with a cost of 57 Argentine cents and "especial" diet with a cost of 80 Argentine cents, with an average calculation between the two diets of 61 Argentine cents per capita daily; that is, a cost of about $0.16. The diet will contain carbohydrates, 373 Gm.; fats, 93 Gm.; proteins, 127 Gm., totaling 2,450 calories. From the standpoint of diet, Argentina is well endowed with an abundance of food at low prices.

Diabetes and the Hypophysis

Drs. Houssay, Biasotti and Rietti recently lectured before the Academia de Medicina of Buenos Aires on the results of experiments on the rôle of the hypophysis in the development of diabetes. When normal dogs, fed with raw meat, were intraperitoneally injected with large doses (7 cc. per kilogram of body weight) of an extract of the anterior lobe of the hypophysis, hyperglycemia appeared, which did not exist on

the first day of the experiment and which gradually increased until the fifth or seventh day. When the glycemia reached or passed 1.75 per thousand cubic centimeters of blood, glycosuria, at a daily rate of from 0.5 to 2 Gm. per kilogram of body weight, was observed. The total content of ketone bodies in the urine daily increased during the periods of hyperglycemia and glycosuria up to 100 and 200 mg. per kilogram of body weight. The resistance of normal dogs and of dogs previously deprived of the hypophysis greatly increased against the toxic and hypoglycemic effects of insulin. The injection of dextrose raised the hyperglycemic curve and increased the respiratory quotient little or not at all. The injections of epinephrine and morphine produced an increased glycosuria. The proteins in the blood, the viscosity of the blood plasma and the globular glutathione were also increased. In dogs with normal thyroids, the basal metabolism was greatly increased. The diabetogenic action of the extract of the anterior lobe of the hypophysis was not observed in dogs during fasting. In this case, hyperglycemia, which appeared at the first day of the experiment, decreased in two or four days and did not increase again even though injections of the extract were continued. The extracts of muscle tissues, kidneys, thyroids and the posterior lobe of the hypophysis, as well as the injection of 0.25 mg. per kilogram of body weight of epinephrine, did not show any diabetogenic action. The hyperglycemic and glycosuric action of the extract of the anterior lobe of the hypophysis was produced even in animals previously deprived of the thyroids and the hypophysis, while in dogs previously deprived of thyroids the metabolic figures increased little or not at all. The presence of hypophyseal insufficiency greatly attenuates the symptoms of phlorhizin diabetes in dogs during fasting. On the contrary, the injection of extract of the anterior lobe of the hypophysis increases the glycosuria and the phlorhizin ketonuria of fasting dogs, previously deprived of the hypophysis, to figures identical with those shown by the control dogs at the same time that the injection prevents hypoglycemia and death of the animals. The results of the foregoing experiments confirm the results of experiments previously reported by the same authors on the importance of the hypophysis in regulating the metabolism of carbohydrates. According to Houssay, the most important function of the hypophysis is of a metabolic nature, just as important although different from that of the thyroids.

Generalized Thoracic Pulsation

Dr. Arrillaga reported in 1931-1932 that in cases of aneurysm of the descending thoracic aorta a generalized pulsation in a forward and lateral direction was present in the entire left hemithorax, while at the same time the right hemithorax was compressed and carried to the left. At the beginning of diastole the movements were reversed; that is, the left hemithorax was compressed and the right was elevated and there was a displacement to the right. Dr. Arrillaga called this phenomenon generalized thoracic pulsation and believed that it was caused by an increased impulse of the heart. Several physicians (Cossio, Padilla y del Castillo, Moia and Braun Menendez, Solari, Dabove, Del Sel and some others) have been able to find this sign. They have also verified a thoracic elevation similar to that described by Dr. Arrillaga in aneurysm of the descending aorta, in cases of hypertrophy of the heart. It is emphasized that the elevation of the thorax takes place during the systole and is not caused by an expansive impulse of the aneurysmal sac which may displace the heart.

Deaths

Among physicians who have died recently were Roberto Acosta, director of public health in 1931, Belizario Oropeza, secretary of public health in 1930, and David J. Rojo, substitute teacher of therapeutics of the Faculty of Medicine of La Plata.

BERLIN

(From Our Regular Correspondent)

March 27, 1933.

Substances in Bitumen Having an Estrogenic Action

The term "bitumen" is used to designate organic fossil substances consisting chiefly of hydrocarbons but containing nearly always oxygen, nitrogen and sulphur, in addition. These are derived mainly from animal and vegetable fat and wax residues. They include mineral oils, petroleum, asphalt and coal. Estrogenic substances are substances that, in accordance with the Allen-Doisy test, produce in the castrated mouse or rat cornified epithelial cells in the vaginal smear. This variety of cell is found in the vaginal smear of normal adult animals only during the estrual period. The estrual hormone, as derived from the follicular fluid of the ovary, the placenta, or the urine of pregnant women or gravid animals, produces not only these vaginal changes but also growth of the uterus and the vagina of castrated animals; also proliferation of the mammary gland, increase of the chrome-brown cells of Frankenhäuser's ganglion (according to Poll-Blotevogel), and regeneration of the hypophysis of castrated animals. Substances from new sources that have given a positive Allen-Doisy test and produce the effects of the follicular hormone may therefore be identified with the follicular hormone.

Professor Aschheim has discovered, as he announced recently before the Berliner Gynäkologische Gesellschaft, and likewise in the *Deutsche medizinische Wochenschrift* and in *Forschungen und Fortschritte*, that such estrogenic substances can be demonstrated in many mineral oils and in coal. Further research with Dr. Hohlweg has led to the following results: Depending on the nature of the source, the substances were tested either directly—such as petroleum—or extracts for injection were obtained through extraction with alcohol, benzene, acetone, and the like, and also by distillation. The evaluation was computed according to mouse or rat units, 1 rat unit being equal to 5 mouse units.

Among the petroleum products were found raw oils that contained 1,000 mouse units per kilogram and others with 2,000 mouse units per kilogram. By means of fractional distillation at temperatures ranging from 200 to 250 C. and with 20 mm. pressure, substances were obtained that were three times as active as the source material.

Naphthalan, a mixture of ingredients of Caucasian petroleum having a high boiling point with from 2.5 to 4 per cent of soap, was prepared and yielded a residue which on testing revealed that the naphthalan contained about 8,000 mouse units per kilogram. Two other naphthalan preparations contained from 2,000 to 3,000 mouse units per kilogram. From natural asphalt an extract was prepared that contained 200 mouse units per gram, so that a kilogram of raw asphalt yielded 10,000 mouse units.

From peat (derived from the Franzensbad Moor), such as is used for therapeutic baths, a dark oil with an aromatic odor was secured that contained 850 mouse units per gram, according to which the raw material yielded about 500 mouse units per kilogram. Lignite on extraction was found to yield 400 mouse units per kilogram. *Montanwachs*, a commercial wax product obtained by the extraction of brown coal with benzene and alcohol, yielded on testing about 8,000 mouse units, and on second testing about 5,000 mouse units, per kilogram. Hard coal *(steinkohle)*, extracted with methyl alcohol and ether, yielded in one test 1,000 mouse units and, in a second test, 600 mouse units per kilogram of raw material. Tar derived from *steinkohle* yielded in one test 70 mouse units per kilogram.

The extracts thus obtained were injected into castrated rabbits and produced complete regeneration of the mucous membrane and musculature of the uterus and the vagina. Also the researches on the Frankenhäuser ganglion (the Poll and

Blotevogel chrome test) revealed in the castrated mice an increase of the chrome-brown cells. On administration of an extract to castrated rats, the castration changes occurring in the anterior lobe of the hypophysis were likewise eliminated. These experiments demonstrate the biologic identity of the newly found substances with the follicular hormone, or the estrogenic hormone of the placenta and urine. The substance has not yet been identified chemically. As regards the origin of these estrogenic substances in bitumen, there is a possibility that they originated during the course of the natural processes that produced petroleum and coal. Further research will be necessary to discover whether these observations have any practical value.

Hospital Invaded by Ants

One of the largest German hospitals, the Rudolf Virchow-Krankenhaus in Berlin, is suffering from an invasion by Monomorium pharaonis, or the little red ant commonly called Pharaoh's ant. The Central Health Administration has announced that the appearance of this ant does not constitute any particular menace for the institution. Pharaoh's ant was first discovered in this hospital shortly after the war, and, as suitable methods of combating it were not found, the ant propagated rapidly. Of late, means have been found to destroy the ants and they have almost disappeared from the wards. The Pharaoh ant, being a tropical insect, stays in the vicinity of the radiator coils, where they are caught, by means of suitable bait, and killed. In the hospital kitchens, the cooking processes are so arranged that it is next to impossible for the ants to get into the food. Nevertheless, the problem of the complete extermination of these ants, which appears to be a small odd species, is not yet solved. An assistant physician of the hospital developed recently a disease that he attributed to this ant, but the courts refused his claim for damages.

THE NETHERLANDS

(From Our Regular Correspondent)

March 11, 1933.

The Malaria Problem

The malaria commission created by the minister of public health, under the chairmanship of Aldershoff, has published its report for 1930 and 1931. The commission has decided that antilarval measures are not of practical value for a country such as the Netherlands, possessing an important irrigation system. The measures that it recommends are a thorough treatment of the patients, and the elimination and destruction of mosquitoes about the homes. The Zuider Zee reclamation project furnishes an exceptional opportunity for putting these measures into practice. The report makes mention of so-called control stables in the crusade against malaria. These stables, located in the malarial districts, have been used for a number of years, and the number of insects captured each month shows a marked seasonal variation.

An interesting feature of the report is an account of experiences with malaria therapy gathered in the communes of Franeker and Wormerveer. In Franeker, since 1928, malaria treatment had consisted of 1 Gm. of quinine sulphate a day for fourteen days and then 1 Gm. every four days for a period of three months. With this treatment there were many recurrences. Beginning with July, 1929, the treatment was changed to 1 Gm. of quinine a day for seven days, and the same treatment for each recurrence. This resulted in a slight increase of the recurrences, but the percentage of recoveries remained about the same. In July, 1930, a combination of plasmochin and quinine was first used. The tablets of 300 mg. of quinine sulphate and 10 mg. of plasmochin are administered for two weeks at the rate of three tablets a day. The results have been good. In forty-four cases of primary malaria there were no recurrences. The experiences with this tablet in Wormerveer were different. Here, three tablets were administered to adults, with smaller doses to children, for a week beginning in March, 1931. Among eighty-two cases of malaria thus treated, thirty-nine cases showed a recurrence during the same year. Hence, additional observations will be needed.

Malaria in the Northern Provinces

The annual report of the commission on malaria in the northern provinces also has been published. The population is becoming increasingly convinced that the destruction of mosquitoes plays an important part in the fight against malaria. The number of cases of malaria reported in 1930 was 2,112. The rate per 10,000 inhabitants was 42.3, as against 53, 35.4 and 34.5 in 1927, 1928 and 1929. The percentage of persons affected with malaria in 1930 shows an increase. The increased percentage reported may be due to a closer contact between the physicians and the population, and to a better detection of cases. In 1930, the commission examined 51,985 localities as compared with 47,180 in 1929. The number of houses inspected was increased to 13,448, the proportion being 38.5 per cent, as against 38.3 per cent in 1929.

The Care of Preschool Children

At the second Congress on Care of Preschool Children, which was held in The Hague, Professor Scheltema said that the organization of the care of preschool children is not well developed. Opinions differ in regard to the organization of this service. Brenkman advocates placing all the care to be given preschool children under one management. A large portion of the time of the conference was devoted to the various types of care that may be given to preschool children. Leupen spoke on kindergartens and preparatory schools, and reviewed the different questions bearing on the subject. Riemenns dealt with the games suitable for young children, describing the playgrounds of Paris and Vienna. Van Venn discussed the work of the consultation centers for children. In the organization of the care of young children, these centers should serve as clearing houses, by keeping in touch with other institutions. Tibout spoke on the rôle of the physician in these consultation centers. Van de Kasteele, Dr. Heybrook and Dr. Van Andel stressed the importance of diet, clothing and dental care of children.

The Examination of Athletes

The federation of the centers for the medical examination of athletes has combined all the centers in the country. Through the incessant efforts of the management, new centers have been created in different places. It has been decided to continue the short radio talks. An inquiry concerning the elimination of certain candidates will be undertaken by one of the physicians of the center. Many of the athletic associations have promised to support the work of the federation.

Notification of Cases of Food Poisoning

Dr. Terburgh, inspector general of public health, has sent to the physicians of the Netherlands a letter recommending a prompt investigation in all cases of food poisoning, made under the direction of the medical inspector, who is charged with advising the mayor on the measures to be taken. The medical inspector will, if necessary, get in touch with the pharmaceutic inspector or the veterinary inspector, who will make investigations in their respective fields. The inspectors in charge of the investigation will see to it that suspected material is sent to the central laboratory of the public health service. Physicians are requested, in a case of food poisoning, immediately to inform by telephone the medical inspector of the district. When there is a recognized health service in the commune, the communication just mentioned should be sent at once to the director of that service. This regulation is in keeping with the law pertaining to infectious diseases, as recognized cases of disease may come under the head of paratyphoid, for which compulsory notification exists.

Marriages

ARTHUR D. WILSON, Carrollton, Ill., to Miss Gudrun O. Birger of Chicago, in Champaign, April 16.

JOHN DEWEY ROGERS, Jasonville, Ind., to Miss Mary Alice King at Farmersburg, April 8.

HENRY CARLISLE SHAW to Miss Dorothy Elizabeth Barker, both of Cleveland, April 15.

HERBERT SPENCER SARNOFF to Miss Beatrice Diamond, both of Chicago, March 22.

MARVIN A. BRENNECKE, Lihue, Hawaii, to Miss India Brasel of Carmi, Ill., March 15.

Deaths

Arthur Bradley Eisenbrey, Cleveland; Medical Department of Western Reserve University, Cleveland, 1906; member of the Ohio State Medical Association and the American Association of Pathologists and Bacteriologists; fellow of the American College of Surgeons; assistant in pathology, New York University and Bellevue Hospital Medical College, 1909-1910; associate in research medicine and assistant demonstrator in pathology, University of Pennsylvania, 1910-1911, instructor in surgery, 1911-1912; instructor in clinical surgery, Columbia University, 1913-1916; associate in pathology at his alma mater, 1916-1919; instructor in principles of surgery, School of Dentistry, Western Reserve University, 1919-1920, assistant professor of oral surgery, 1920-1926, and since 1926 professor of oral surgery; served during the World War; on the staff of St. Alexis Hospital; aged 52; died, March 31, of heart disease.

William Ophüls ⊕ San Francisco; University of Göttingen, Germany, 1895; dean and professor of pathology, Stanford University School of Medicine; professor of pathology and bacteriology, University of Missouri, 1897-1898, and Cooper Medical College, 1898-1912; in 1918, instructor in pathology at the U. S. army military training school; secretary, 1912-1913, and chairman, 1913-1914, of the Section on Pathology and Physiology, American Medical Association; member of the American Association of Pathologists and Bacteriologists; past president of the city board of health; since 1898, pathologist to the Lane Hospital; author of publications on pulmonary tuberculosis, coccidioidal granuloma, nephritis, arteriosclerosis and other medical subjects; aged 61; died, April 27.

William Kerwin ⊕ St. Louis; Washington University School of Medicine, St. Louis, 1908; assistant professor of gynecology and obstetrics, St. Louis University School of Medicine; member of the Western Surgical Association; fellow of the American College of Surgeons; aged 47; on the staffs of the Jewish Hospital, City Hospital, Barnard Free Skin and Cancer Hospital, St. Luke's Hospital and St. Mary's Hospital, where he died, April 6, of a streptococcus infection.

John Allen Hofmann, Canton, China; Medical Department of Western Reserve University, Cleveland, 1906; associate Fellow of the American Medical Association; professor of medicine and past president of the Hackett Medical College and affiliated institutions; formerly superintendent of the David Gregg Hospital; aged 54; died, April 8, of spinal meningitis.

Charles Henry MacFarland, Jr., Cleveland; Cleveland College of Physicians and Surgeons, Medical Department Ohio Wesleyan University, 1905; veteran of the Spanish-American and World wars; formerly superintendent of the Cleveland City Hospital; aged 55; died suddenly, March 29, of heart disease.

William Henry Porter, Brooklyn; College of Physicians and Surgeons in the City of New York, Medical Department of Columbia College, 1877; member of the American Urological Association; emeritus professor of medicine, New York Post-Graduate Medical School; aged 79; died, March 27, of heart disease.

Alfred Clinton King ⊕ New Orleans; Medical Department of the Tulane University of Louisiana, New Orleans, 1895; professor of clinical surgery, Graduate School of Medicine, Tulane University of Louisiana; fellow of the American College of Surgeons; aged 64; died, April 1, of pneumonia.

Frederick Steele Hartmann ⊕ Chicago; Rush Medical College, Chicago, 1885; for many years on the staff of the West Side Hospital; formerly surgeon to the Cook County and St. Anthony de Padua hospitals; aged 70; died, March 17, of cerebral hemorrhage and coronary thrombosis.

⊕ Indicates "Fellow" of the American Medical Association.

Elmer J. Burch ⊕ Duquoin, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1886; past president of the Perry County Medical Society; aged 68; on the staff of the Marshall Browning Hospital, where he died, April 2, of peritonitis following resection of the colon for adenocarcinoma.

James Murray Cook, Sardis, Ga.; Medical Department of Emory University, Atlanta, 1915; member of the Medical Association of Georgia; past president of the Burke County Medical Society; aged 46; died, January 2, in the Lenwood Hospital, Augusta, of peritonitis and cholecystitis.

Charles Raphael Mayer, New Orleans; Hahnemann Medical College and Hospital, Chicago, 1885; president of the Louisiana Homeopathic Board of Medical Examiners; aged 72; died, February 11, of adenocarcinoma of the thyroid with metastases to the cervical glands and lungs.

Charles Gaskill Stivers, Los Angeles; University of Pennsylvania School of Medicine, Philadelphia, 1891; member of the California Medical Association; formerly secretary of the Los Angeles County Medical Association; aged 63; died, March 25, of pneumonia.

Martin Donohue Delaney ⊕ Alexandria, Va.; Georgetown University School of Medicine, Washington, D. C., 1898; fellow of the American College of Surgeons; on the staff of the Alexandria Hospital; aged 58; died, February 10, of tumor of the brain.

Clarence Russell Fisher, La Fayette, Ind.; Indiana University School of Medicine, Indianapolis, 1932; intern at St. Elizabeth Hospital; aged 29; died, April 7, in the Witham Hospital, Lebanon, of injuries received in an automobile accident.

Ivison Boyd Ridgway, New York; University of Virginia Department of Medicine, Charlottesville, 1914; member of the Medical Society of the State of New York; aged 42; died, March 27, in the Union Hospital, of intestinal obstruction.

Andrew Jackson Berry ⊕ Los Angeles; University of Louisville (Ky.) School of Medicine, 1890; Barnes Medical College, St. Louis, 1897; aged 67; died, February 21, in the French Hospital, of carcinoma of the stomach and esophagus.

William Gadsden Gamble, Kingstree, S. C.; Medical College of the State of South Carolina, Charleston, 1894; member of the South Carolina Medical Association; aged 64; died, April 5, of cerebral hemorrhage and intestinal obstruction.

Gilbert Houston ⊕ West Warwick, R. I.; University of Vermont College of Medicine, Burlington, 1918; aged 38; died, February 21, in the Jane Brown Hospital, Providence, of acute appendicitis and hemolytic streptococcus peritonitis.

John L. McHenry, Hamilton, Ohio; Eclectic Medical Institute, Cincinnati, 1892; aged 62; died, January 27, in the Mercy Hospital, of shock and pneumonia, following burns received when his clothing was ignited by a gas heater.

Charles Howard Miller ⊕ San Leandro, Calif.; Cooper Medical College, San Francisco, 1896; fellow of the American College of Physicians; aged 61; died, February 2, of acute coronary artery occlusion and arteriosclerosis.

Daniel B. Stumpf, Buffalo; Homeopathic Hospital College, Cleveland, 1876; member of the Medical Society of the State of New York; aged 76; died, April 9, in the Millard Fillmore Hospital, of septic peritonitis.

Francis Drew Randall, Tampa, Fla.; University of Vermont College of Medicine, Burlington, 1880; member of the Massachusetts Medical Society; aged 74; died, March 18, of influenza, chronic cystitis and uremia.

John Alexander McNaughton, Brussels, Ont., Canada; Faculty of Medicine of Trinity College, Toronto, 1880; L.R.C.P., Edinburgh, Scotland, 1883; aged 77; died, February 9, of myocarditis and uremia.

Benjamin Arthur Hopkins, New Westminster, B. C.; Canada; University of Manitoba Faculty of Medicine, Winnipeg, 1905; member of the Pacific Coast Oto-Ophthalmological Society; died suddenly, January 22.

William Lewis Dinsmore, Decatur, Ala.; Vanderbilt University School of Medicine, Nashville, Tenn., 1881; member of the Medical Association of the State of Alabama; aged 81; died, March 28, of arteriosclerosis.

Andrew Cook Johnson, Garfield, Ga.; Baltimore Medical College, 1897; member of the Medical Association of Georgia; aged 60; died suddenly, February 20, at Swainsboro, of coronary thrombosis and arteriosclerosis.

William Forrest West, Jr., Everett, Wash.; University of Pennsylvania School of Medicine, Philadelphia, 1928; member of the Washington State Medical Association; aged 29; died, in March, of septicemia.

William Maclay Lyon, Kansas City, Mo.; Hering Medical College, Chicago, 1901; Kansas City Hahnemann Medical Col-

lege, 1904; served during the World War; aged 58; died, March 8, of heart disease.

Charles R. Wylie, Pottstown, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1897; aged 71; died, January 21, in the Reading (Pa.) Hospital, of ureteral calculus and uremia.

Maximilian L. Loeb, New York; Yale University School of Medicine, New Haven, Conn., 1897; served during the World War; aged 58; died, April 15, of angina pectoris and coronary thrombosis.

John Theodore Kergan, La Habra, Calif.; Hahnemann Medical College of the Pacific, San Francisco, 1910; aged 47; died, February 25, in Los Angeles, of coronary sclerosis and chronic myocarditis.

William Parsons Derby, Framingham, Mass.; Harvard University Medical School, Boston, 1890; member of the Massachusetts Medical Society; aged 66; died suddenly, March 28, of heart disease.

Nathaniel M. Lewis, Murfreesboro, Tenn.; Vanderbilt University School of Medicine, Nashville, 1882; Confederate veteran; aged 85; died, March 26, at the Rutherford Hospital, of heart disease.

Ezra Peters, Johnstown, Ohio; Bennett College of Eclectic Medicine and Surgery, Chicago, 1878; Civil War veteran; aged 86; died, January 20, in the City Hospital, Newark, of arteriosclerosis.

Edgar Armistead Dulin, Bartlesville, Okla.; Georgetown University School of Medicine, Washington, D. C., 1865; formerly mayor of Nevada, Mo.; aged 89; died, April 7, of heart disease.

Laura Carter, Shelbyville, Ind.; Laura Memorial Woman's Medical College, Cincinnati, 1902; member of the Indiana State Medical Association; aged 66; died, April 4, of cerebral hemorrhage.

Godfrey Deziel, Minneapolis; St. Paul Medical College, 1886; an affiliate Fellow of the American Medical Association; aged 71; died, March 27, in St. Andrew's Hospital, of coronary thrombosis.

Charles U. Harrison, Little Rock, Ark.; Kentucky School of Medicine, Louisville, 1879; also a druggist; aged 79; died, February 5, of arteriosclerosis, chronic nephritis and coronary occlusion.

William Alonzo Vaughan ✠ Timberville, Va.; Jefferson Medical College of Philadelphia, 1884; secretary of the county board of health; aged 73; died, March 1, of acute miliary tuberculosis.

Michael George Franghiadi, Corona, N. Y.; Bellevue Hospital Medical College, New York, 1893; aged 64; died, April 8, in the Bellevue Hospital, New York, of tumor of the bladder.

Nathaniel Curtis Rogers, Chicago; University of Pennsylvania School of Medicine, Philadelphia, 1907; aged 50; was found dead, March 16, of chronic myocarditis and nephritis.

James Tracey Joiner, Herod, Ill.; St. Louis College of Physicians and Surgeons, 1909; aged 53; died, March 2, in the Lightner Hospital, Harrisburg, of cerebral hemorrhage.

Joseph Emmett Waller, Claremont, Calif.; Lincoln (Neb.) Medical College of Cotner University, 1896; aged 80; died, February 13, of coronary thrombosis and arteriosclerosis.

Clayton Jay Hinman, Los Angeles; Northwestern University Medical School, Chicago, 1904; aged 59; died, February 27, of lobar pneumonia and chronic myocarditis.

Edson Rhodes, La Crosse, Wis.; Rush Medical College, Chicago, 1883; aged 70; died, March 12, in the Lutheran Hospital, of bronchopneumonia and cellulitis of the arm.

Luther H. Morgan, West Frankfort, Ill.; American Medical College, St. Louis, 1894 and 1896; also a minister; aged 63; died, February 5, of valvular heart disease.

Frederick Merrill Ranney, Los Angeles; Bellevue Hospital Medical College, New York, 1885; aged 73; died, February 12, of chronic myocarditis and nephritis.

Franklin Goble Fay ✠ Sacramento, Calif.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1886; aged 67; died, February 14, of cerebral hemorrhage.

Cary T. Hull, Hamilton, Ohio; Cincinnati College of Medicine and Surgery, 1894; aged 65; died, April 2, in the Mercy Hospital, of skull fracture received in a fall.

Carl Amandus Mueller ✠ Redding, Calif.; Missouri Medical College, St. Louis, 1889; aged 66; died, January 30, of cerebral hemorrhage and bronchopneumonia.

Charles D. Warden, Los Angeles; Hahnemann Medical College and Hospital, Chicago, 1878; aged 80; was killed, March 15, when struck by an automobile.

John O. Hoffhine, Columbus, Ohio; Columbus Medical College, 1877; aged 79; died, April 1, in the Grant Hospital, of arteriosclerosis and pulmonary edema.

Frederick Gebhard Miller, Kearney, N. J.; New York Homeopathic Medical College and Flower Hospital, 1914; aged 49; died, March 29, of carcinoma.

James A. Campbell, St. Thomas, Ont., Canada; Western University Faculty of Medicine, London, 1912; aged 49; died, February 22, of cerebral hemorrhage.

James McTeer Miller ✠ Wytheville, Va.; College of Physicians and Surgeons, Baltimore, 1896; aged 63; died suddenly, March 12, of myocarditis.

Julius G. Kiefer, Milwaukee; University Medical College of Kansas City, Mo., 1889; also a pharmacist; aged 71; died suddenly, April 4, of heart disease.

Richard M. Singer ✠ Chicago; Chicago College of Medicine and Surgery, 1916; aged 42; died, April 8, of cerebral hemorrhage and cardiorenal disease.

George Wiley Broome, La Jolla, Calif.; Missouri Medical College, St. Louis, 1872; aged 83; died, February 25, of heart disease and pleurisy with effusion.

Lloyd George Leland, Warren, Ohio; Medical Department of Western Reserve University, Cleveland, 1883; aged 73; died, April 2, of heart disease.

William Bates Hopkins, Hamilton, Ont., Canada; Victoria University Medical Department, Coburg, 1886; aged 74; died, January 10, of endocarditis.

George Brunt Carbert, Campbellville, Ont., Canada; Trinity Medical College, Toronto, 1888; aged 65; died, February 23, of cerebral thrombosis.

Alice Mitchell De Forest ✠ Detroit; Michigan College of Medicine and Surgery, Detroit, 1900; aged 65; died, March 27, of cerebral embolism.

Frank D. Parker, San Diego, Calif.; University of Buffalo School of Medicine, 1874; aged 81; died, February 23, of arteriosclerosis and pneumonia.

Victor Wade Metzler, Coshocton, Ohio; Jefferson Medical College of Philadelphia, 1898; aged 62; died, January 18, of heart disease and influenza.

Edward Brinkerhoff, Bristolville, Ohio; Eclectic Medical Institute, Cincinnati, 1886; aged 71; died, April 1, of pneumonia and diabetes mellitus.

Bernard Newman Malo, Edmonton, Alta., Canada; University of Alberta Faculty of Medicine, Edmonton, 1929; aged 33; died, in January.

Jacob H. Yount, Newton, N. C.; University of Maryland School of Medicine, Baltimore, 1876; aged 81; died, April 1, of carcinoma of the prostate.

Sarah E. Fletcher, Columbus, Ohio; Hahnemann Medical College and Hospital, Chicago, 1896; aged 82; died, February 7, in Grove City, of senility.

Thomas H. Steers, Valley Stream, N. Y.; Bellevue Hospital Medical College, 1879; aged 76; died suddenly, in February, of heart disease.

Pearson McPherson ✠ Chicago; Rush Medical College, Chicago, 1886; aged 69; died, April 6, of myocarditis and cerebral hemorrhage.

James Arthur Fairie, Montreal, Que., Canada; McGill University Faculty of Medicine, Montreal, 1909; aged 59; died suddenly, January 8.

Julius Dodd, New Castle, Del.; Hahnemann Medical College and Hospital of Philadelphia, 1904; aged 75; died, April 16, of coronary embolus.

Edwin R. Kreider, Monroeville, Ohio; Jefferson Medical College of Philadelphia, 1890; aged 65; died, April 5, of cerebral hemorrhage.

John B. Hirons, Springfield, Ohio; Medical College of Ohio, Cincinnati, 1885; aged 70; died, April 4, of cerebral hemorrhage.

Charles Jacob Wesley Karn, London, Ont., Canada; Trinity Medical College, Toronto, 1888; aged 70; died, February 27.

J. Monroe Klinger, Harrisonburg, Va.; University of Wurzburg, Germany, 1880; aged 83; died, March 29, of heart disease.

Valentine H. Taliaferro, Eatonton, Ga.; Atlanta Medical College, 1892; aged 64; died, February 25, of angina pectoris.

Reece N. Weaver, Atlanta, Ga.; Atlanta College of Physicians and Surgeons, 1901; aged 68; died, February 7.

Thomas Oliver Redden, Indianapolis; Medical College of Indiana, Indianapolis, 1892; aged 66; died, March 21.

Bureau of Investigation

ALPHACATALYST

A Later Name for Armstrong's Oxycatalyst

For some years there has been on the market an alleged treatment for cancer that was originally known as "Armstrong's Oxycatalyst" but is now called "Alphacatalyst." Inquiries first came about the product in 1927, and in this department of THE JOURNAL for May 19, 1928, an article was published on the subject. Inquiries still continue to come in. This from a physician in the middle west:

"What can you report to me on the use of 'Alphacatalyst' in the treatment for cancer? It is an intravenous treatment and the active principle is claimed to be the alpha particles of radium and is put out by the Farnsworth Laboratories, 159 North State Street, Chicago."

A Chicago laryngologist writes:

"Will you please give me all information concerning 'Alphacatalyst'? It is contained in a vial and it was drawn to my attention as being used intravenously for carcinoma of the epiglottis. This product is made by the Farnsworth Laboratories, 159 North State Street, Chicago, Illinois."

And this from a layman:

"Can you please give me the information: Of what value is the injection of Alphacatalyst for cancer, if any?"

Alphacatalyst is put on the market by a Chicago concern using the trade name Farnsworth Laboratories. One Merle G. Farnsworth is said to be the main factor. Armstrong's Oxycatalyst was put out from Los Angeles by the impossingly named Radium Research Foundation, which at the time was said to be owned by Robert A. Armstrong, with M. G. Farnsworth as the active manager. In THE JOURNAL'S article it was brought out that while the product was alleged to be in the experimental stage, commercial agencies had been established in various parts of the country, doctors were charging $200 for a single injection, and in other ways the methods of exploitation seemed to smack more of economics than of science.

Following the publication of the article, Robert A. Armstrong wrote to the Bureau of Investigation in an attempt to defend the methods of exploitation. As to the composition of his preparation, Mr. Armstrong stated that he was "perfectly frank in saying to the physician" that:

"Armstrong's Oxycatalyst contains in part the essential elements of metameric protein devoid of its combustible products, together with anionic halogens in solution with Alpha particles of Radium derived from fifty micrograms of Radium element together with its derivatives in a normal saline carrier."

This statement was wholly without meaning, but it was sonorous and apparently imposingly technical. No wonder Mr. Armstrong had no hesitation in being "perfectly frank" when he could do so without making himself intelligible.

In 1929 some specimens of Armstrong's Oxycatalyst were submitted to the A. M. A. Chemical Laboratory. Although the advertising of the Armstrong product has been based on the claim that the preparation is radioactive, no radioactivity was found in the specimens. These facts were publish in THE JOURNAL, Jan. 18, 1930, page 206.

Friction apparently developed between Robert A. Armstrong and the Radium Research Foundation, for the Los Angeles *Times* on Sept. 9, 1930, carried an item reading:

"Demanding $107,670 assertedly suffered through failure to pay for certain patent medicines furnished by him, Robert A. Armstrong yesterday sued the Radium Research Foundation, Merle G. Farnsworth, and John C. Hendee, who he says agreed to pay him $12.50 to $20 for each ampule of medicine supplied. The medicines are known as 'luetic antigen' and 'Halanum,' and Armstrong claims to be the originator and sole distributor of them. He says the defendants are preparing substitute remedies dangerous to patients, and asks the court to restrain their sale or distribution."

In connection with the reference to Halanum in the item just quoted, it is of interest to note that the National Food and Drugs officials declared that the Radium Research Foundation of Los Angeles shipped into Illinois in 1928 a quantity of Halanum that was adulterated and misbranded. The government charged that although Halanum was labeled as containing a definite amount of radium, it, in fact, contained no radium and was actually a weak solution of common salt in water. Halanum was sold as the greatest aphrodisiac known and of particular value in impotency and frigidity. These and similar claims were declared false and fraudulent, and the court condemned the product and ordered that it be destroyed.

Apparently it was after Armstrong's break with the Radium Research Foundation that Farnsworth transferred the business to Chicago.

The Farnsworth Laboratories are just as vague regarding the composition of the Alphacatalyst as Armstrong was regarding the Oxycatalyst. The only difference between the two is that the Farnsworth concern uses fewer words to conceal thought. According to the booklet of the Farnsworth Laboratories:

"The Alphacatalyst is a solution containing a radium derivative, employing as its active principle the Alpha particle of radium. It has been described as a colloidal suspension."

In spite of the fact that the Alphacatalyst (Oxycatalyst) has been on the market six years, there is still no scientific evidence to indicate that it has any value. A Los Angeles physician who some years ago had tried the Oxycatalyst reported in December, 1930, that he had ceased using it because of an experience that he had had a year earlier. It appears that a patient with inoperable cancer was given a dose of the Oxycatalyst and within three minutes died with all the symptoms of shock.

Correspondence

REDUCTION OF DISLOCATED SHOULDER

To the Editor:—In THE JOURNAL, Dec. 24, 1932, page 2181, is presented "a new method" for reduction of dislocated shoulder, consisting essentially of lateral traction by means of a bandage passed over the left shoulder and under the right arm of the operator and then across the flexor aspect of the semiflexed elbow of the patient; the operator's palms rest against the patient's anterior and posterior axillary folds, his thumbs serving to push the head of the humerus into its socket. Success is reported in one case in which roentgen observations are not mentioned. It is stated that "a search of the literature has failed to reveal any similar method." Among others, the methods described by H. A. Lawton (Dislocation of Shoulder Joint, *Lancet* **1**:525, 1881) and Hans Spitzy (Einfaches Einrenkungsverfahren bei Schulterluxationen, *Zentralbl. f. Chir.* **43**:934, 1916) might be considered "similar."

Recently, in a fairly complete survey of the literature on the methods of reducing shoulder dislocation since the introduction of Kocher's method (1870), I found that, in addition to a fair number of "modifications" of the latter, there had been forty-six "new" methods (none of them identical) proposed up to 1926. Twenty of these methods involve lateral traction, eight downward and seven upward. The remaining eleven methods do not involve traction, six of them consisting essentially of adduction of the arm over a fulcrum and five belonging to a class that might be described as "trick" methods. Successful reduction in one or more cases is reported for every method, so that success alone is a dubious measure of merit.

Since the past half century produced this many "new" methods of reducing a dislocated shoulder, it is hard to estimate the total number of methods previously devised by man throughout the course of his history. One early author of an extensive treatise on articulations discusses the shoulder joint first of all, saying "When dislocation toward the axilla occurs, many people know how to reduce it, for it is a frequent accident. . . . Those who are subject to frequent dislocations of the shoulder are generally able to effect reduction themselves" (Hippocrates, Magnus: Περὶ ἀρθρῶν, section 1 and 2, about 400 B. C.). He then describes some half dozen methods, not one of which is *precisely* identical with any encountered in my recent survey. Surely the intervening 2,300 years were not

allowed to slip by without many other "new methods" being devised by various individuals.

The following was written nearly half a century ago (Lucas, R. C.: Reduction of Dislocation of Shoulder by Abduction, *Brit. M. J.* **1**:1062, 1886).

It is, perhaps, because it is to no one's advantage to make himself the champion of those who have passed away, that methods of treatment practiced generations ago are constantly being rediscovered and attributed to the genius of modern thought. The subject of dislocations is one especially prone to this recurrent revelation. A deformity of a joint immediately resulting from an injury is just the kind of accident likely to attract the attention of early observers, and so we find dislocations very exactly described upward of 2,000 years ago. When it is considered that the acutest surgical intellects have from this distant period been exercised in the direction of treatment, it is not difficult to understand how exceptional must be the kind of manipulation that has never yet been attempted. The commoner the injury, the greater is the chance for many to exercise their ingenuity upon it; and so we find the modes of reduction employed for dislocation of the shoulder more numerous than for any other joint. So numerous are they, that writers of textbooks, being limited as to space, are compelled to select certain methods to the exclusion of others. But the moment a method is omitted, it is almost sure to be rediscovered.

JOSEPH NASH, M.D., New York.

DISCOVERY OF TOXIC INGREDIENT IN JAMAICA GINGER

To the Editor:—I have read with interest your editorial on "Ginger Poison" (THE JOURNAL, March 25) and wish to call your attention to the second paragraph, in which it is stated that "credit is due to the United States Public Health Service for having discovered the real cause of a most baffling series of symptoms of "jake paralysis."

The actual discovery of this ingredient—triorthocresyl phosphate, was made by the chemists of the Bureau of Industrial Alcohol and was turned over to the Public Health Service for physiologic tests to determine whether the substance that was found in the adulterated ginger was the ingredient that actually produced paralysis in more than 30,000 cases throughout the United States. It was this laboratory which first determined and isolated the triorthocresyl phosphate as such and determined it quantitatively in numerous samples, and some of this isolated substance was turned over to the Public Health Service for physiologic tests.

PETER VALAER, Chemist, Washington, D. C.

DEHYDRATION AND EPILEPSY

To the Editor:—I have noted in THE JOURNAL, April 1, the report on dehydration and epilepsy by Drs. Fetterman and Kumin, concerning twenty-one epileptic patients observed for a period of about one month.

I feel that it is dangerous to reduce a patient's fluids to 100 cc. a day; the purposes and objectives of the method are ignored when carried to this extreme degree. The objective is not to subtract fluid to an intolerable degree, from the customary routine of the patient, but to subtract fluid from the patient's body fluid reservoirs. Unless the patient demonstrates actual loss of body weight, there is no subtraction or no real dehydration. A pint, or 500 cc., weighs approximately one pound, and unless water is subtracted from the body tissue reservoirs there will arise no change in cerebrospinal fluid volume or pressure. If the patient receives sufficient liquids in other forms, such as the diet, enemas, ice cream and so-called watery solids, he may amply compensate for the denial of liquid per se in the prescribed amounts received. Fluid cannot be subtracted from the body tissues without a loss of body weight. Dehydration, therefore, to be evaluated, does not depend on the liquids prescribed but on the intelligent balancing of fluids, so that a progressive loss of stored tissue fluid is obtained by various means. It is humanly impossible, in my experience, to maintain curtailment of liquid to 100 cc., or 3½ ounces, a day. The clinician fails only because the patient either steals fluid surreptitiously or refuses to cooperate; this lack of cooperation was noted by Fetterman and Kumin.

The adult patient in whom dehydration is to be attempted should never be placed on a liquid level below 16 ounces. The diet should contain not more than 40 total ounces. With this diet, liquid should not be received in excess of 20 total ounces of fluid, if results are to be obtained. These factors must be varied, depending on whether the patient is "water-logged," fat and hydrated, or thin and emaciated. The body storage reservoirs in the former require drastic dehydration, whereas, in the latter, tissue fluids are subtracted on a milder routine. Each case becomes a separate problem, and no fixed formula can be applied to all. The clinician must bear in mind the fact that, in attempting dehydration, he is trying to accomplish by therapeutic measures a subtraction of fluid volume from the craniovertebral cavity, so as to permit an equivalent expansion of circulating blood volume, which brings with it the advantages of better oxygenation and nutrition. In the end he is attempting to create an improvement in cerebral function, which in turn may serve to control better the convulsive seizure, and posttraumatic symptoms of dulness, headache, and loss of concentration, consequent to a low-grade cerebral anemia. The application of dehydration, when properly carried out, in the convulsant states, eclampsia, intracranial pressure manifestations and in some cases of hypertension, has been well established, and many men throughout the country today are observing the beneficial results that follow a proper and comprehensive use of this procedure when indicated. As an adjunct to other therapeutic measures directed toward the correction of the cerebral manifestations of headache, vomiting, mental hebetude, convulsions, stupor and respiratory embarrassment, if intelligently and appropriately used, it has proved to be of distinct value in correcting temporary disturbances in cerebrospinal fluid pressure or volume relationships. Its use in chronic conditions is justifiable only when intelligent cooperation or supervision is obtainable, where its continued effectiveness and the objective to be gained are to be of distinct benefit to the patient, in spite of the obvious discomfort and thirst that arise from its proper application.

The clinician must supplement measures of dehydration, such as purgation, sweating, and direct drainage of spinal fluid, where body weight loss is undesirable, and above all the measures should be considered as an adjunct, although in certain conditions dehydration is fairly specific. That there is a distinct danger from overdehydration must be emphasized. An attempt to balance body fluids to a degree compatible with the individual's continuation of the program and physical health requires, above all, the careful analysis of each case before the program is instituted, and a wide variation in its adaptation. It is only one of the methods at our disposal which assist in the subtraction of a certain amount of fluid from the cerebrospinal fluid reservoirs, which in turn permits an equal amount of blood volume to take its place. Therefore, when it is necessary or desirable to improve cerebral function, its application finds the best result.

A loss of from 5 to 11 pounds in the adult is frequently required before the benefits of dehydration are obtainable. That reports of uncontrolled cases observed for a period of only a few weeks should be published as evidence against the procedure places the matter in the same category as diabetes was before the discovery of insulin. That is, crude attempts to balance the carbohydrates in the diet failed to bring forth the appropriate results; when extreme care, computation and fine measurements were employed, the results obtained were satisfactory. I waited two and one-half years before presenting my observations on the epileptic patient. Some of these cases were maintained in the hospital under strict control for periods of one year, and there is no question in my mind today that

appropriate balance of fluids, along with other therapeutic measures and a careful analysis of each case, has yielded the best possible measures of control which we have at our disposal. The 23 per cent of total failures in the chronic convulsive group, irrespective of the method used, clearly indicates that there is much further to be done, and that there are definite limits to our ability to solve properly certain of these problems. Nevertheless, improvement in mental acuity, and the subsidence or marked modification of attacks in approximately 65 per cent of cases covering a period of eight years, represents a distinct advance, and in my opinion the intelligent application and proper utilization of the principle involved in dehydration, as well as the correction of other obvious deficiencies, will offer further beneficial results in many of these difficult problems.

TEMPLE FAY, M.D., Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DIFFERENCES BETWEEN POISON OAK AND POISON IVY

To the Editor:—Can you give me a definite answer to this question: If poison ivy and poison oak are growing side by side, how would a person by branches, leaves and other characteristics distinguish one from the other? Also does poison oak grow in New York State? Please omit name.

M.D., New York.

ANSWER.—The names poison ivy and poison oak are sometimes used for the same plant; consequently there is some confusion in their use. McNair, who recently made a study of the taxonomy of these plants, has divided them as follows: Rhus toxicodendron L. is considered by him as the poison ivy, Rhus quercifolia (Michx.) Steud. is designated as Eastern poison oak, and Rhus diversiloba T. & G. is Western poison oak.

The geographic distribution of these plants is as follows: poison ivy: Canada, United States and Mexico between 15° and 50° north latitude except California; Eastern poison oak: New Jersey, southward and westward to Texas; Western poison oak: Washington, Oregon and California. It is evident, therefore, that neither poison oak grows in New York State.

Eastern poison oak.

Western poison oak.

Poison ivy.

The descriptions of the leaves, flowers, fruits and seeds of the three species are as follows:

Eastern Poison Oak.—The leaflets are broadly rhombic-ovate, conspicuously three to seven lobed, permanently somewhat pubescent beneath (or rarely glabrous at maturity), rather firm in texture and somewhat veiny, from 4 to 10 cm. long. The petals on the male flowers are from 2 to 3 mm. long and 1 mm. wide. The fruit is subglobose, from 4 to 5 mm. in diameter. The seeds are flattened, smooth, from 3.5 to 5 mm. long and from 2 to 3 mm. thick.

Western Poison Oak.—The leaflets are very obtuse, entire, crenulate or irregularly obtusely lobed, the incisions acute, sparingly pubescent or glabrate. The petals of the female flowers are from 2 to 3 mm. long and from 1 to 1.5 mm. wide; of the male flowers, from 3 to 4 mm. long and from 1 to 1.5 mm. wide. The fruit is subglobose and from 4 to 7 mm. in diameter. The seeds are from 4 to 6 mm. long and from 2 to 2.5 mm. thick, flattened and more or less irregularly roughened with knoblike protuberances.

Poison Ivy.—The leaflets are sparingly pubescent or glabrate, ovate to rhombic, mostly acute, entire, serrate or irregularly and coarsely few-toothed; the length of the terminal leaflets is from 4 to 19 cm. The petals of the female flower are 2 mm. long and 1 mm. wide; of the male flower, from 3 to 4 mm. long and from 1 to 2 mm. wide. The fruit is subglobose and from 3 to 6 mm. in diameter. The seeds are roughened similarly to those of Western poison oak and are from 3 to 5 mm. long and from 2 to 2.5 mm. thick.

Poison ivy can readily be distinguished from both poison oaks by its acute leaflets, as those of both the other species are obtuse. The leaf margins and seed shapes are also different, as shown in the descriptions. The seeds of Eastern poison oak are smooth, while those of poison ivy are roughened, with irregular knoblike protuberances.

This information has been obtained from "The Taxonomy of Poison Ivy," written by James B. McNair and published by the Field Museum of Natural History, Chicago.

SENSITIVITY TO CAT HAIR

To the Editor:—I am anxious to secure information regarding the use of material that may be used for a test as well as for treatment in a patient who is extremely sensitive to the presence of a cat. As soon as he comes near one, even though he is not aware that there is one present, he begins to feel uncomfortable. He has coryza, conjunctivitis and bronchitis, and the conjunctivitis, coming on within a few minutes, is so marked that he sees only with difficulty on account of the profuse watery secretion. After leaving this area the symptoms gradually disappear, lasting about three days. 1. Would you advise a cutaneous test similar to the Schick or similar to the vaccination? 2. Would you use a paste rubbed in the skin after the scratch method of a cutaneous test? Which of the two methods is better, and why? 3. My textbook, Blumer's, states that a cutaneous test, starting at 1: 100,000, should be given cutaneously so as to test the degree of immunity. Would it be possible to give a test of 1: 1,000,000, then 1: 100,000 and then 1: 10,000 at one time on different parts of the arm or is it necessary to do one test at a time? 4. In desensitizing, What would be the proper amount to start with and what dilution would be used? 5. In case of an overdose, what are the definite symptoms to be watched for and what should be given to counteract this? 6. In desensitizing, how often should the inoculation be given? 7. How would you determine when to give the next dose? 8. What is the prognosis for recovery? 9. Would the recovery be temporary or permanent? 10. If the recovery is temporary, would it be advisable to begin further treatment and when? 11. Would it be safe after giving a series of treatments to allow the patient to come in contact with a cat or would it be safer to do a cutaneous test first? 12. Kindly advise me what material to use for the test, the treatment and where it can be secured.

A. L. OLSHANSKY, M.D., Albany, N. Y.

ANSWER.—Hypersensitiveness to cat hair has been known for many years. It varies from a mild rhinitis with or without an occasional cough to a most presistent and disabling rhinitis and bronchial asthma, with or without an associated conjunctivitis. The patient mentioned is evidently quite sensitive. Why keep the cat at all? Why not get rid of the cat and allow the symptoms to subside, as they probably will if there is no further exposure to cat hair?

However, assuming that the presence of the cat is essential, and emphasizing that exposure to the cat should be as little as possible (better none at all during the period of treatment), the following obtain:

1. A cutaneous test would probably be safer than an intracutaneous one, as the patient is evidently very hypersensitive. This should be made with a fine scalpel, a needle or a razor blade.

2. A powdered extract of cat hair may be used and dissolved with tenth normal sodium hydroxide, or a liquid extract may be tried. Pastes are probably not so satisfactory.

3 and 4. After the scratch (cutaneous) test has been made and found positive, the patient should be given a series of intracutaneous tests, ranging from a 1: 10,000 to a 1: 100,000,000 dilution of extract of cat hair. The forearms may be used. The dilutions may be made with physiologic solution of sodium chloride or other diluent. The weakest dilution should be injected toward the elbow, the strongest toward the wrist. It is best to inject 0.02 cc. of each into the skin. A control (physiologic solution of sodium chloride) should likewise be injected at the time of testing. All the tests can safely be done at one sitting. Records should be kept and that dilution which just fails to give a positive test should be chosen as the starting point for desensitization treatment; 0.05 cc. of this dilution should be the initial injection and should be given subcutaneously in the upper part of the arm or back. The dosage should be increased approximately 50 per cent each time, and stronger dilutions should be used in succession; e. g., 1: 100,000,000, 1: 10,000,000, 1: 1,000,000, 1: 100,000, 1: 10,000 and 1: 1,000. It is probably not necessary or safe to go much higher than this last. Aseptic technic is essential.

5. Overdosage may cause local reaction (marked swelling at the site of injection) or general reaction (asthma, hay fever,

urticaria, one, two or all of these may result). Epinephrine, 1:1,000, in a dosage of from 0.5 to 1 cc. subcutaneously, is usually quite successful in counteracting the reaction. It may have to be repeated once or twice. In case of a reaction it is safer to lower the next dosage of cat hair extract and then increase it more cautiously.

6 and 7. The injections may be given about twice a week. If the arm is very sore, it is advisable to wait a little before the next injection.

8. The prognosis for recovery is excellent if the cat is not there, and problematic but usually fairly good if exposure is not too close.

9. The recovery might be permanent or might not. In many cases, entire relief has been obtained for many years. There have been many relapses.

10. If the cat is indispensable, treatment should be started again, as in the beginning.

11. If the patient has been carried up to a 1:1,000 dilution and has not been exposed to cat hair while under treatment, it might be safe for him to come in contact with the cat again. The presence or absence of a cutaneous test would bear little weight, although if a patient after desensitization treatment does not give positive skin test any longer he is usually well desensitized.

12. The materials to be used for the tests and treatment can be purchased from any one of several pharmaceutic houses that advertise in THE JOURNAL.

EFFECTS OF ALCOHOL ON WASSERMANN TEST—NEGATIVE TEST IN UNTREATED SYPHILIS

To the Editor:—1. I remember from my student days the fact that sailors often take on large quantities of alcohol before undergoing physical examinations in order to render the Wassermann reaction negative. Is this possible? If so, what quantity of alcohol would have to be ingested and in what form, and how long would any effect on the Wassermann or Kahn test last? 2. What is the effect, if any, of the ingestion of alcohol during the course of treatment of syphilis? Is there any decrease in the spirocheticidal activity of neoarsphenamine or iodobismitol if the patient drinks alcohol in any form or quantity following the injection of the drug? 3. What is the incidence of negative Wassermann and Kahn reactions in untreated syphilis? I was recently consulted by a patient who had multiple penile chancres about five years ago. There was a solitary inguinal gland which was incised and drained at that time. The lesions were negative by dark-field examination and cleared up readily with local treatment only. The patient was told at the time that he had only a Ducrey bacillus infection and Wassermann and Kahn reactions throughout the past five years have all been negative. He has never had any physical signs or clinical symptoms of syphilis. He states that he has never had any clinical symptoms or any evidences of a secondary reaction. There are no palpable glands anywhere in the body. What advice should be given this patient as to his possibility of having syphilis? What about treatment? Please omit name. M.D., Missouri.

ANSWER.—1. There is difference of opinion as to the effect of alcoholism on serologic tests for syphilis. According to Craig and Nichols, from 6 to 8 ounces (175 to 235 cc.) of whisky taken in the course of twelve hours is sufficient to render positive Wassermann reactions negative. Kolmer, however, reports that eight syphilitic patients whose blood he has been able to examine with his Wassermann method "during acute alcoholic debauches" gave positive reactions. Browning and McKenzie also report no change from positive to negative Wassermann reactions during acute alcoholism. There appears to be no published report on the effect of alcoholism on the Kahn reaction. A personal communication from the author of this method indicates that alcoholism does not influence the Kahn reaction.

2. Alcohol in moderate doses taken during the course of treatment probably has no harmful effect. Alcoholic debauches, however, might so injure the liver and other organs as to predispose to untoward effects. There appears to be no experimental evidence as to the effect of alcohol taken during treatment. If moderate amounts of alcohol were harmful, syphilologists would have long ago become aware of it, since among Europeans and other peoples the daily use of such amounts is widespread.

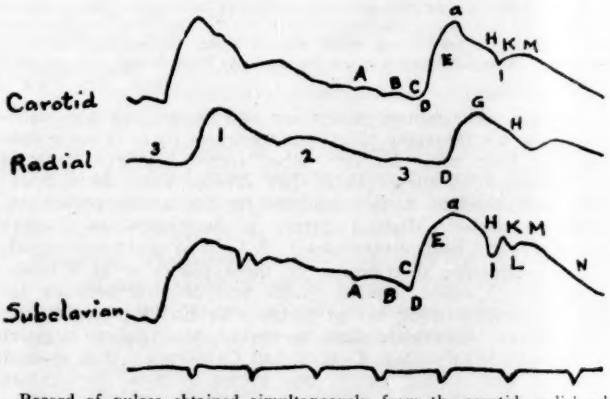
3. Both tests may be negative in isolated cases of syphilis; less frequently on repeated examinations. There is no agreement among different workers as to the relative incidence of negative reactions obtained with both tests in the various stages of syphilis. It is generally believed that this incidence is smaller with the Kahn than with the Wassermann test. In the case referred to, the clinical observations suggest multiple chancroids and not chancres. The persistently negative serologic reaction furnishes additional evidence against syphilitic infection.

CURVES SEEN IN SPHYGMOGRAM

To the Editor:—Kindly explain, by means of a diagram if possible, the significance of the various curves seen in a sphygmogram taken from a normal radial pulse. I have been informed by medical friends, if I have understood them aright, that a sphygmographic tracing does alter even after severe anemia, acute asthenic diseases, degenerative changes in cardiac musculature causing diminution of its contractile force, or even when a person goes to a high altitude. I fail to understand how this can be. For, in all these and similar cases, the loss in the force of the ventricular systole, and the loss of tone of the muscular coat of the arteries, are factors that are bound to have some effect on the volume and strength of the radial pulse. Should this not influence the sphygmogram curves? The temporary cardiac dyspnea noticed among persons going to high altitudes varying from 7,000 to 10,000 feet is, I understand, caused by a diminished supply of oxygen to the tissues; the trouble disappears after a rest and as soon as an increase in the number of red cells has taken place. But during the period of hypoxemia, should not the sphygmogram show some change in the rhythm and force of the pulse? For practitioners situated in isolated districts, polygraphs and electrocardiographs are out of the question; but it seems to me that with the aid of a sphygomanometer and an accurately adjustable sphygmograph it should be quite possible for a medical man to diagnose all disorders of cardiac rhythm with a certain degree of accuracy. Kindly mention the different types of sphygmographs now available on the market. Please omit name and address. M.B., C.M., India.

ANSWER.—The accompanying illustration is a copied record of pulses obtained simultaneously from the carotid, radial and subclavian arteries by the optical method of registration.

Wave 1 is due, of course, to systolic ejection. The cause of wave 2, the dicrotic wave, is still under discussion. Some consider it a centripetally reflected wave; others consider it a centrifugal wave due to a rebound from the closing semilunar valves. In some sphygmograms one finds at times a small predicrotic and a small postdicrotic wave. Both, according to Wiggers, are "caused by waves reflected from the periphery."



Record of pulses obtained simultaneously from the carotid, radial and subclavian arteries by the optical method of registration. (From Wiggers, Pressure Pulses, p. 70.)

There seems to be no literature on sphygmogram records in the disease conditions asked about. All wrist sphygmographs recording by levers have so many inherent imperfections that they have gone into scientific discard since O. Frank designed an optical instrument for registration of the pulse. However, even this modern sphygmograph may be as troublesome "in isolated districts" as the polygraph or electrocardiograph and probably would not be nearly so informative. Before investing in any of the various instruments it would be well to read the chapter on the "Arterial Pulse" in "The Pressure Pulses in the Cardiovascular System," by Carl Wiggers, New York, Longmans, Green & Co., 1928. The article is replete with bibliographic references. If then the correspondent is still of a mind to set out along his original program, Dr. Carl Wiggers of the Department of Physiology, Western Reserve University Medical School, Cleveland, Ohio, will advise him on the most serviceable type of instrument for his purposes.

IMMUNITY IN MEASLES

To the Editor:—Does measles confer a permanent immunity? Recently a child, aged 1, was discharged from a hospital for contagious diseases, after being retained the usual length of time for measles. Two days later the child developed Koplik spots and a somewhat typical measles rash. Please omit name. M.D., New York.

ANSWER.—One attack of measles usually confers protection against further attacks; second attacks do occur, but rarely. Relapse also may occur at intervals of from ten to forty days or so after the original attack; in a given case it may be difficult to determine whether there has been a new infection from without.

SYNTHETIC COLORS FOR CANDIES

To the Editor:—What substances are used to color candies, and to what extent are they injurious? What substances are used to imitate vegetable flavors in candy making, and to what extent are they injurious? Please omit name.

M.D., New York.

ANSWER.—Candy, perhaps, as much as any commercial food product, is made under undesirable conditions, such as may attend the petty candy kitchen. This statement does not apply to hundreds of reputable confectioneries, large and small, wherein scrupulous care is exercised in the selection of both coloring and flavoring entering candies.

Most candies are colored with synthetic colors permitted by federal regulations. The general list is composed of:

Red shades: Ponceau 3R, amaranth, erythrosine, Ponceau SX.
Orange: Orange I.
Yellow: Naphthol yellow S, tartrazine, yellow A B, yellow O B, Sunset yellow F C F.
Green: Guinea green B, light green S F yellowish, fast green F C F.
Blue: Indigotine, brilliant blue F C F.

These colors are regarded as harmless for most persons in the quantities used in any food, but it is believable that a few persons are susceptible to their action, because of sensitivity or, at least, heightened susceptibility.

Flavoring is liable to contain harmful agents. Only the fact that minute amounts are employed saves the consumer. Most flavors are made as natural derivatives and as imitations. Confectionery trade journals extensively advertise all manner of "imitation" fruit flavors. Reference to books furnishing recipes for various trades reveals astonishing formulas for candy flavors. By way of example, isopropyl alcohol, coumarin, and synthetic rose otto are the ingredients of one formula for caramel flavor extract.

This is one of hundreds of formulas apparently violating the U. S. Department of Agriculture's regulation implied in the following definition:

A flavoring extract is a solution in ethyl alcohol of proper strength of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and conforms in name to the plant used in its preparation.

Federal regulations make a distinction between "extract" and "flavoring." Nonalcoholic flavoring products may be labeled with the term "flavoring," provided they contain the same kind and preparation of flavoring ingredients as are required for extracts, and provided suitable labeling indicates that the vehicle is not alcohol. Further federal regulation permits of the use of imitation flavoring extracts and flavors, provided the word "imitation" is plainly stated on the package. "Worthless imitations" are, however, not tolerated, the requirement being that such imitations substantially take the place of the product they imitate.

Extensive information on extracts and flavors, colors, and so on may be found in the following publications:

Labeling Flavoring Extracts, U. S. Department of Agriculture, Food and Drug Administration (revised to March 1, 1932).
Definitions and Standards for Food Products, U. S. Department of Agriculture, June, 1932.
Regulations for the Enforcement of the Federal Food and Drugs Act, ed. 10, U. S. Department of Agriculture, November, 1930.
Certification of Coal Tar Food Colors, U. S. Department of Agriculture, October, 1927.

From a practical point of view, neither colors nor flavors are common causes of serious harm to candy eaters.

Oil of wintergreen, either natural or synthetic, used in flavoring candy, has on a few occasions of overeating of candy led to a diagnosis of "poisoning from candy flavoring."

GEORGIA WARM SPRINGS FOUNDATION

To the Editor:—I have had a patient who spent three months at Georgia Warm Springs following infantile paralysis and who seems to have made little progress since his return home. Would you consider it worth while to have this patient return? In other words, do these springs offer anything beyond ordinary massage and muscular reeducation?

M.D., Chicago.

ANSWER.—Warm Spring Foundation is an institution at Warm Springs, Georgia, about eighty miles south and a little west of Atlanta. The institution was founded by President Franklin D. Roosevelt, who has been a frequent visitor and patient.

The institution is under the medical direction of Dr. Michael Hoke, formerly of Atlanta, and formerly president of the American Orthopedic Association.

The physical therapy is under the direction of Miss Alice Lou Plastridge, who was trained under Goldthwait, Lovett and Legg of Boston and the leading orthopedic surgeons in Chicago.

The pools at Warm Springs are fed by spring water with a temperature between 88 and 92 degrees all the year round, with an average of 89 F. There are three pools—two that belong to the Warm Springs Foundation and one that is public property.

Some of the advantages of a sojourn to Warm Springs include the muscle reeducation, under-water gymnasium, swimming, massage, heliotherapy, training in walking and a desirable climate. The stimulation of the patient's morale is one of the highly important attributes of the institution. There is no institution that ranks higher than Warm Springs Foundation in its ability to make a person an independent physical unit. There are constantly from sixty to a hundred patients, including physicians, who are undergoing physical reconstruction and reeducation in this institution.

"BICHROME CHECK" IN REFRACTION

To the Editor:—Do you have any scientific information on file that justifies the claims made for the "Bichrome Check" described in the enclosed folder and sold by the Southeastern Optical Company of Atlanta, Ga.? If you have such information, I will appreciate your sending it to me. Please omit name.

M.D., Louisiana.

ANSWER.—The "Bichrome Check" has not yet received scientific corroboration, nor has it been accepted by the ophthalmologic profession. The one statement in the advertising circular that "accommodation cannot intervene and cause trouble with measurements" is sufficient ground to view the whole scheme askance, for of all things that have not been learned yet, the suspension of accommodation without cycloplegia is the one about which there is least known.

GOLDSTEIN'S HEREDOFAMILIAL BLEEDING (NONPURPURIC AND NONHEMOPHILIC)

To the Editor:—Heredofamilial angiomatosis with recurring hemorrhages, the condition which I described as heredofamilial bleeding, or heredofamilial epistaxis (Rendu-Osler-Weber disease), with or without multiple hemorrhagic telangiectasia (nonpurpuric and nonhemophilic), was not considered in the answer given for the reported case of "unusual bleeding" in THE JOURNAL, March 18, page 839. In the case of the woman, aged 53, who has had epistaxis all her life and yet shows a normal blood picture (4,580,000 red blood cells and 91 per cent hemoglobin) and normal clotting time, a history of her mother's having had some nosebleed leads one to suggest a more careful examination of the patient and her eight brothers and sisters. A careful history and examination may disclose multiple small telangiectases and the occurrence of nosebleed, rectal bleeding, hematuria, or gastric bleeding.

The possibility of the presence of this condition is not excluded by the fact that apparently only one or two members of this family (in the present generation) are definitely known to have epistaxis. Several other members of this family may have some scattered telangiectases in the nose, on the lips, in the mouth or on the finger tips which are being overlooked.

It is of interest to note that Schwartz, of Fairport Harbor, Ohio, recently reported the use of female sex hormone in epistaxis (*Clin. Med. & Surg.* **40:** 111 [Feb.] 1933) in the case of a youth, aged 18, seen by the author during May and June, 1932. The patient had suffered from frequent epistaxis for a few years: "the nose showed pin-point areas of erythema" (I believe these were small telangiectases, and it would be interesting to know if, on careful examination, other members of this patient's family are found to have small telangiectatic lesions of the nose, mouth, lips or similar locations) "on the right septal wall." He gave the patient seven doses of female sex hormone by injection and a preparation of the same substance by mouth, three times daily, together with the injections, and continued the oral administration of the pills until July 1. Schwartz says: "there have been no attacks of epistaxis from that time to December 12, 1932."

To be considered, of course, are David's hemorrhagic disease in women (endocrine deficiency), Frank's essential thrombopenia, Glanzmann's thrombasthenia, chronic hemorrhagic purpura (Lusitanus, Riverius, Werlhof), Willebrand and Jurgens' "constitutional thrombopathy"—more common in women than in men, with normal blood platelets, much prolonged bleeding time, prolonged menstruation, and frequent and persistent nosebleed, bleeding from slight wounds difficult to check and without joint complications (as occurs in hemophilia), hemorrhagic capillary toxicosis (Frank) and pseudohemophilia hepatica. Familial hemophilia and accidental or sporadic hemophilia are easily excluded.

Following are articles on the subject:

Goldstein, H. I.: Heredofamilial Bleeding, *M. Rev. of Rev.* **38:** 679 (Dec.) 1932.
Goldstein, H. I.: Hereditary Hemorrhagic Telangiectasia with Recurring (Familial) Hereditary Epistaxis, *Arch. Int. Med.* **27:** 102 (Jan. 15) 1921.
Goldstein, H. I.: Goldstein's Heredofamilial Angiomatosis with Recurring Familial Hemorrhages (Rendu-Osler-Weber's Disease), *Arch. Int. Med.* **48:** 836 (Nov., pt. 1) 1931, abstr. *Arch. Dermat. & Syph.* **25:** 707 (April) 1932.
Goldstein, H. I.: Hereditary Multiple Telangiectasia, *Arch. Dermat. & Syph.* **26:** 282 (Aug.) 1932.
Goldstein, H. I.: *Tr. Am. Therap. Soc.* **32:** 47, 1932.
Goldstein, H. I.: Hereditary Epistaxis, *Internat. Clin.* **3:** 148 (Sept.) 1930; **4:** 253 (Dec.) 1930.
Willebrand and Jurgens: *Klin. Wchnschr.* **12:** 414 (March 18) 1933.
David, W.: *Med. Klin.* **22:** 1755 (Nov. 12) 1926.

The case described in THE JOURNAL, March 18, page 839, perhaps more nearly fits into the group of "heredofamilial bleeding, with or without angiomatosis."

HYMAN I. GOLDSTEIN, M.D., Camden, N. J.

Council on Medical Education and Hospitals

COMING EXAMINATIONS

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Milwaukee, June 12. *Applications should be filed before May 15.* Sec., Dr. William H. Wilder, 122 South Michigan Blvd., Room 1417, Chicago.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: The *general oral, clinical and pathological* examination will be held in Milwaukee, June 13. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh.

AMERICAN BOARD OF OTOLARYNGOLOGY: Milwaukee, June 12. Sec., Dr. W. P. Wherry, 1500 Medical Arts Bldg., Omaha.

CALIFORNIA: *Reciprocity.* San Francisco, June 14. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento.

CONNECTICUT: *Basic Science.* Prerequisite to license examination. New Haven, June 10. Address State Board of Healing Arts, 1895 Yale Station, New Haven.

DELAWARE: Wilmington, June 13-15. Sec., Dr. Harold L. Springer, 1013 Washington St., Wilmington.

FLORIDA: Jacksonville, June 12-13. Sec., Dr. William M. Rowlett, Box 786, Tampa.

GEORGIA: Atlanta, June 14-16. Joint Sec., Mr. R. C. Coleman, 111 State Capitol, Atlanta.

INDIANA: Indianapolis, June 20-22. Sec., Dr. William R. Davidson, 413 State House, Indianapolis.

IOWA: Iowa City, June 6-8. Dir., Mr. H. W. Grefe, Capitol Bldg., Des Moines.

KANSAS: Kansas City, June 20-21. Sec., Dr. C. H. Ewing, Larned.

KENTUCKY: Louisville, June 7. Sec., Dr. A. T. McCormack, 532 W. Main St., Louisville.

MARYLAND: *Regular.* Baltimore, June 20-23. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore. *Homeopathic.* Baltimore, June 20-21. Sec., Dr. John A. Evans, 612 W. 40th St., Baltimore.

MISSOURI: St. Louis, June 7-9. Address, State Board of Health, Capitol Bldg., Jefferson City.

NATIONAL BOARD OF MEDICAL EXAMINERS: *Parts I and II.* The examinations will be held at centers where there are five or more candidates, June 26-28 and Sept. 13-15. Ex. Sec., Mr. Everett S. Elwood, 225 S. 15th St., Philadelphia.

NEBRASKA: Omaha, June 7-9. Dir., Bureau of Examining Boards, Mrs. Clark Perkins, State House, Lincoln.

NEW JERSEY: Trenton, June 20-21. Sec., Dr. James J. McGuire, 1101 Trenton Trust Bldg., Trenton.

NORTH CAROLINA: Raleigh, June 19. Sec., Dr. B. J. Lawrence, 503 Professional Bldg., Raleigh.

OHIO: Columbus, June 6-9. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

TEXAS: Galveston, June 20-22. Sec., Dr. T. J. Crowe, 918-19-20 Mercantile Bldg., Dallas.

VERMONT: Burlington, June 21-23. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 21-23. Sec., Dr. J. W. Preston, 803 Medical Arts Bldg., Roanoke.

WISCONSIN: *Basic Science.* Milwaukee, June 17. Sec., Prof. Robert N. Bauer, 3414 W. Wisconsin Ave., Milwaukee. *Regular.* Milwaukee, June 27-29. Sec., Dr. Robert E. Flynn, 401 Main St., La Crosse.

WYOMING: Cheyenne, June 5. Sec., Dr. W. H. Hassed, Capitol Bldg., Cheyenne.

INTERNSHIPS IN ARMY HOSPITALS

The Surgeon General has recently notified appointees to internships in army hospitals that, as a part of the federal economy program, these positions have been abolished and appointments canceled. Also, many interns are deferring their entry into practice because of the present economic situation, and are prolonging their period of institutional service. Inevitably, fewer places remain to be filled by this year's graduates. Hence there are at the present time an unusual number of well qualified men available. The Council on Medical Education and Hospitals, desiring to be of service both to the hospitals and to the medical students, requests that all hospitals approved for intern training that still have vacancies for interns so notify the Council at once, stating how many vacancies there are and the dates on which they must be filled. Address the Council on Medical Education and Hospitals, 535 North Dearborn Street, Chicago, Illinois.

Massachusetts Endorsement Report

Dr. Stephen Rushmore, secretary, Massachusetts Board of Registration in Medicine, reports 14 physicians licensed by endorsement from Jan. 3 to Jan. 31, 1933. The following colleges were represented:

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
Yale University School of Medicine	(1930),	(1931)	N. B. M. Ex.
Tulane University of Louisiana School of Medicine	(1930)	(1931)	N. B. M. Ex.
Boston University School of Medicine		(1929)	N. B. M. Ex.
Harvard University Medical School	(1929), (1930,2),	(1931)	N. B. M. Ex.
Tufts College Medical School		(1931,3)	N.B.M.Ex.
University of Pennsylvania School of Medicine		(1930)	N. B. M. Ex.
University of Vermont College of Medicine	(1930),	(1931)	N. B. M. Ex.

California Reciprocity Report

Dr. Charles B. Pinkham, secretary, California State Board of Medical Examiners, reports 11 physicians licensed by reciprocity with other states and 2 physicians licensed by endorsement from Jan. 3 to Jan. 12, 1933. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
College of Medical Evangelists		(1931)	Oregon
Baltimore Medical College		(1911)	Maryland
University of Maryland School of Medicine and College of Physicians and Surgeons		(1922)	Utah
Detroit College of Medicine and Surgery		(1917)	Michigan
Washington University School of Medicine		(1930)	Missouri
John A. Creighton Medical College		(1909)	Montana
Ohio Medical University		(1900)	Ohio
University of Oklahoma School of Medicine		(1922)	Missouri
Hahnemann Medical College and Hospital of Philadelphia		(1910)	Penna.
Jefferson Medical College of Philadelphia		(1927)	Ohio
Queen's University Faculty of Medicine		(1907)	N. Dakota

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
University of Illinois College of Medicine		(1928)	U. S. Navy
University of Minnesota Medical School		(1928)	U. S. Navy

Book Notices

The Differential Diagnosis of Endocrine Disorders. By Allan Winter Rowe, Director of Research, Evans Memorial, Massachusetts Memorial Hospitals, Boston. Cloth. Price, $4. Pp. 220. Baltimore: Williams & Wilkins Company, 1932.

The science of endocrinology constitutes one of the newer chapters in medical history, and one that is still in the writing. The procedure of differential diagnosis offers a basis for an initial resolution of the underlying etiology in a group of derangements of the endocrine glands. As an endocrine diagnosis is reached only after the elimination by test and observation of the many nonglandular conditions that may simulate an endocrinopathy, the procedure is adapted for general diagnostic purposes. The material from which this monograph is drawn is the result of investigations since 1912, in the course of which more than 5,000 individuals have been carefully studied by a large group of clinicians and laboratory workers. The work is offered by the author in condensed monographic form in the hope that it may be of some service in the evaluation of obscure or incipient conditions.

The whole investigation was divided into three phases. In the beginning, groups of apparently normal individuals were subjected to a long series of tests and observations under carefully controlled conditions, and the individual level of performance was exactly recorded. The second phase called for the application of the same series of measurements to individuals in whom there existed clear-cut involvement of single glands. The third and last phase was the study of the level of function of the individual case.

Emphasis is made on the fact that no single finding of endocrine disease should be adduced to support such a diagnosis until all possible nonendocrine causes of the phenomenon have been ruled out by observation and test.

Results are drawn largely from cases exhibiting disorders of the pituitary, the thyroid, the gonads and the suprarenals. A few cases of diabetes have been included for purposes of comparison. The parathyroids have been omitted because little is known concerning the disease picture produced by disturbance of their function. A few structures, such as the pineal body, the thymus and the spleen, are to be regarded as on the borderline, their place in the endocrine family being by no means firmly established. In the series the author has seen but two or three in which there has been apparently a coexistent primary disturbance in more than one endocrine gland.

The author presents the outline of analysis of each case. The first step in the study of each patient calls for a compilation of a comprehensive and detailed medical history, complemented by a thorough and careful physical examination. The second phase is the performance of the somewhat elaborate series of routine, standardized laboratory tests and measurements which experience has shown to be potentially significant. The third phase of the study deals with the application of such additional special examinations as are suggested by the history, the physical examination and the results of the routine

laboratory procedures. The third phase also includes the many special examinations, such as an eye and urologic examination. All the results are correlated and the whole mass of material is subjected to critical analysis. To conserve the patient's time and yet to permit thorough study, a definite schedule has been drawn up which outlines the sequence of certain basic routine procedures and allows opportunity for the inclusion of a wide variety of special examinations.

The monograph is divided into three sections. The first deals with clinical considerations and occupies the main portion of the book. It is concerned with evaluation and comparative figures concerning sex and age, primary and secondary complaints, the medical history and the physical examination. The second section covers the laboratory measurements, such as the urine, chemical examination and morphology of the blood, basal metabolism and galactose tolerance, and gives differential diagnostic illustrations. In the third section, special examinations and roentgenologic data are discussed. Throughout the book there are numerous valuable tables comparing the various endocrine and nonendocrine groups.

The volume must not be considered a finished clinical textbook on the differential diagnosis of endocrine disorders. It is a monograph consisting for the most part of a compilation of data concerning a group of endocrine disturbances obtained under carefully controlled conditions. Much of this is of great importance in the evaluation of the individual case but does not contribute to a clinical diagnosis of the specific endocrine disorder. Such a statement is not a reflection on the author or his work but rather on the field in which he is writing. The positive yield of clinical facts from such a critical presentation is necessarily small and concerns itself more with trends rather than with sharp definitions.

The author has established for the medical profession data that may be useful in the differential diagnosis of endocrine disorders. It will find its greatest usefulness for those clinicians who are critical in their study of endocrine cases. A large list of bibliographic references is given. These are purely expository in character and designed solely to give details that exceed the limits of the presentation.

Handbuch der Röntgendiagnostik und -therapie im Kindesalter. Unter Mitwirkung von Fachgenossen. Herausgegeben von Prof. Dr. St. Engel, Leiter der Kinderklinik der Städt. Krankenanstalten, Dortmund, und Dr. L. Schall, Leiter der Kinderabteilung des Landeskrankenhauses, Homburg-Saar. Paper. Price, 72 marks. Pp. 720, with 637 illustrations. Leipzig: Georg Thieme, 1933.

This is a compendium of roentgen diagnosis and therapy in infants and children, edited by Stephan Engel of Dortmund and Ludwig Schall of Homburg. The various chapters and special subjects are written by collaborators whom the editors have chosen as authorities for their special subjects. The subject matter falls into several divisions. A general introduction to the physical knowledge of x-rays and special technic for their employment with infants and children precedes the chapters on diagnosis. The portion of the contents on therapy is also preceded by chapters on physical theory and technic. The sections on roentgen diagnosis are introduced by a chapter on normal roentgenologic skeletal anatomy. Then follow chapters on diseases of the skeletal system, including excellent discussions of the bone changes in rickets, scurvy, congenital syphilis and bone tuberculosis. Fractures are not included in this work, as the editors have confined themselves to the roentgen diagnosis of internal diseases. The section on roentgen diagnosis of the thorax is introduced by chapters on the development of the chest and its organs in infants and children. An important and instructive chapter by Engel on the anatomy of the thoracic lymphatics in relation to roentgen diagnosis is unusually well illustrated, as is the chapter on the influence of thoracic deformities on the chest organs. The chapters on acute and chronic nonspecific diseases of the lungs are well illustrated, both in the text and by the accompanying roentgenograms. Diseases of the pleura, including empyema and interlobar and mediastinal pleurisy, are well discussed and illustrated. The chapters on pulmonary tuberculosis, from primary focus to cavity formation, contain well illustrated examples, as do the chapters on the mediastinum and heart. An instructive table on congenital cardiac defects offers a comparison of the shape of the heart with the various lesions in this group. The section on the digestive tract includes discussions on esophageal stenosis, pylorospasm and stenosis, ptosis in asthenic children, visualization of the appendix, megacolon, and related subjects. Chapters on the urogenital system and nervous system are included, and a special chapter is devoted to the technic of encephalography. The chapters on therapy include such subjects as the use of roentgen treatments in tuberculosis, blood and lymphatic diseases, eczema, asthma, epilepsy and tumors. Of interest also are the discussions of the effect on the fetus of roentgen treatment of pregnant women, and the use of roentgen treatment for hypertrophy of tonsillar and adenoid tissues. The discussion on the diagnosis and treatment of thymus hyperplasia is critical and well presented. The mistakes in diagnosis and the dangers of therapy are pointed out. The completeness and excellence of the text throughout are enhanced by the clear illustrations. The editors and authors should be congratulated on the excellence of this volume, which should prove an aid to every one interested in roentgen diagnosis and therapy of infants and children.

A Textbook of Surgery. By John Homans, M.D., Assistant Professor of Surgery, Harvard Medical School. Compiled from Lectures and Other Writings of the Members of the Surgical Department of the Harvard Medical School. Second edition. Cloth. Price, $8. Pp. 1231, with 517 illustrations. Springfield, Illinois: Charles C. Thomas, 1932.

This is a record and amplification of lectures in surgery given by the members of the surgical department of Harvard Medical School. These lectures, together with other material supplied by the various instructors, have been augmented and edited by the author in a book intended to teach the fundamentals of the practice of surgery. In this edition the original material has been condensed by the deletion of redundant passages, and new material has been added. The most important additions deal with basophil adenomas of the pituitary, coccidioidal granuloma, generalized osteitis fibrosa cystica associated with parathyroid adenomas and hyperparathyroidism, and tumors of the islands of Langerhans with hyperinsulinism. Other subjects newly introduced include acrocyanosis, aspiration of the pericardium, congenital strictures of the duodenum, diathermy, embolectomy, fascial spaces of the foot and their relation to septic processes, fat embolism, nonunion of fractures, Paget's disease of the nipple, changing conceptions of shock, and torula infection. A chapter on anesthesia has been added at the end of the volume. The pagination of the original fifty-six chapters remains the same as in the first edition in spite of the additional new material. The book is written in a narrative style, making it easy reading. One of the most valuable features, especially from the standpoint of a student, is a brief historical summary, at the beginning of each chapter, of the material to be discussed. A biographic index of fifty-two pages gives the names quoted in the text, the pages on which the names appear, the subject of the writing to which reference has been made, and the source of the reference. The volume contains a surprising amount of valuable information and is a credit to Harvard Medical School.

Lehrbuch der allgemeinen Pathologie und der pathologischen Anatomie. Von Professor H. Ribbert. Second edition revised by Dr. Carl Sternberg, Professor für pathologische Anatomie an der Universität in Wien. Paper. Price, 38 marks. Pp. 650, with 759 illustrations. Berlin: F. C. W. Vogel, 1933.

This revision of Ribbert's famous textbook of general pathology and pathologic anatomy has been undertaken to preserve for students of pathology an honored and extremely popular work. New sections have been added, old ones rewritten, and 120 new illustrations, many of them photomicrographs, included. The book is essentially a textbook for students and for that reason is brief in its consideration of individual pathologic processes. Frequent references to different German handbooks of pathology help to overcome this defect. The section on general pathology includes 239 pages; the remainder deals with special pathologic anatomy. Morphology is kept in the foreground throughout, although functional aspects are frequently correlated with structural changes. The illustrations are excellent and are well selected to amplify the written portions. It is natural that in the desire to preserve the character of the original book some of the defects of age would be in evidence. For instance, it is questionable whether a superficial consideration of parasites and bacteria belongs properly in a modern textbook of pathology in this day of adequate textbooks in these fields. Furthermore, Ehrlich's figures from the side-chain theory and discarded views of immunology might well

be deleted from a textbook on pathologic anatomy, to allow space for the inclusion of more material of a pathologic-anatomic nature. The book could be improved further by more attention to the many contributions to the field of pathology from other than German sources. In general, however, Professor Sternberg has performed a difficult task in attempting, as he stated in the previous edition, to "pour new wine into old bottles," and he deserves the thanks of all students of pathology for his efforts to keep the much esteemed Ribbert textbook as available and as useful for the future as it has been in the past.

The Carnegie Foundation for the Advancement of Teaching. Twenty-Seventh Annual Report of the President and of the Treasurer. Paper. Pp. 174. New York, 1932.

Part I of this report contains the proceedings of the trustees and of the executive committee.

In part II, entitled "Education and the Economic Situation," Dr. Henry Suzzallo, president of the foundation, says that existing conditions impose certain practical policies of curtailment on college management but that a human policy is none the less insistently demanded. Economy, he holds, is consistent with improved methods both of teaching and of learning. Educational policies having this result have already been demonstrated in many institutions. They represent the best of the changing trends in American higher education, such as (1) the transfer of emphasis from the teacher to the learner, thus making independent study more important than class instruction; (2) the broadening of the curriculum so as to emphasize that thoughtful correlation of knowledge which develops interest, flexibility of mind and resourcefulness above highly specialized practical knowledges and skills, and (3) the placing of institutional emphasis on a smaller number of educational services rendered with high quality, rather than on many services rendered under minimum standards.

Dr. Suzzallo also suggests the more effective distribution of services among higher educational institutions; the reduction of the number of major lines of study by making the first two college years basal for all students; requiring a large number of comprehensive courses; substituting fields of concentration for departmental specialization, and providing fewer elective courses and offering them less often; and the reorganization of teaching to emphasize the learner through reducing the number of class sessions, using more technics and increasing the size of classes wherever the subject or the teaching technic permits.

President Suzzallo continues: "It is doubtful institutional ethics to allow at present a policy of economy, however necessary, to lead to discharges from the academic staff. It is far better to divide the work and the salary budget. Those long in service should have the most secure tenure. In most cases the older members have the poorest chance to be reemployed. The younger staff members, those on term appointments, have the lowest salaries and probably the smallest accumulated surplus. If released, they probably could not find other teaching positions—at least not for a considerable period of time. For the present there is only one sound moral policy for administrators and trustees to pursue, and that is to divide the available work that can be paid for. Thus no professor's family now attached to the institution need be without a guarantee of at least a minimum living."

Dr. Henry S. Pritchett, president-emeritus of the foundation, declares: "In the process of formal education in a school, a certain amount of information will be acquired depending, in the main, on the energy and natural capacity of the pupil and the wisdom of the teacher. But as a matter of fact, the acquiring of information has almost nothing to do with education. Education consists in training the habits and developing the powers of the mind, not in acquiring knowledge. . . . And what are the principles that underlie the formation of sound habits of the mind? Mainly, two: First, that self help is the only way to an education. A child can be guided, but he educates himself. Second, the habit of doing what is done, thoroughly, accurately, to the best of the child's ability. In the inculcation of these two habits of the mind lies the fundamental difference between the educational process in America and in England, Germany, and France."

Part III of the report contains four contributions grouped under the heading "Educational Inquiry." 'Analyzing the problem of student selection for the professions, Alfred Z. Reed finds that: "The struggle for existence, under competitive conditions, will separate the successes from the failures, and renders a verdict more final and decisive than any tests or examinations could provide. Whatever other devices are utilized, success or failure must ultimately be determined by the hard facts of experience. This . . . helps to explain why there is a constant pressure, on the part of sanguine youth, to rely upon this method alone—to demand a chance to 'make good' on its own responsibility, no matter how unfavorable are the judgments, and how despondent the prognostications, of its elders." There are, however, "two reasons why this extreme claim must be disallowed. One is its cruelty to the individual practitioner, who finds himself committed to a career for which he is not fitted. The other is its unfairness to those members of the public—employers, clients, patients—whose interests would often be inadequately served. Considerations alike of individual kindliness and of social efficiency justify a system of educational and professional tests to determine who shall, and who shall not, be permitted to proceed further in his chosen career."

Tribute is paid to distinguished educators and scholars who died within the year, notably David Starr Jordan, president-emeritus of Stanford University. This section, together with the treasurer's report, constitutes part IV.

Copies of this report and any of the fifty-two other publications of the foundation may be had without charge on application, by mail or in person, to the office of the foundation at 522 Fifth Avenue, New York City.

Medizinische Praxis: Sammlung für ärztliche Fortbildung. Herausgegeben von Prof. Dr. L. R. Grote, Chefarzt der C. von Noorden Klinik, Frankfurt a. M., Prof. Dr. A. Fromme, Direktor der chirurgischen Abteilung des Stadtkrankenhauses Dresden-Friedrichstadt, und Prof. Dr. K. Warnekros, Direktor der Staatlichen Frauenklinik zu Dresden. Band XVI: Syphilis des Herzens und der Gefässe. Von Prof. Dr. Ed. Stadler, leitender Arzt der inneren Abteilung des Stadtkrankenhauses Plauen i. V. Paper. Price, 6.50 marks. Pp. 82, with 8 illustrations. Dresden: Theodor Steinkopff, 1932.

Stadler treats syphilis of the heart and blood vessels in a short monograph organized along conventional lines with emphasis on clinical considerations. The changes in the small vessels during the primary and secondary stages of syphilis are presented briefly, and scant consideration (one page) is given the cardiovascular aspects of congenital syphilis. Slightly more than half of the text is devoted to syphilitic aortitis. Like others of its kind, this monograph suffers from lack of appreciation of the growth in knowledge of the pathology of syphilis that has occurred in the past twenty years. Thus the pathology of syphilis of the myocardium is that of Virchow, recognizing only gummatous and fibrotic forms. The histologic changes in syphilitic myocarditis the author considers to be of no practical interest (page 7). Much more complete treatment is accorded syphilitic aortitis, with good descriptions of the medial lesions, but here the author labors under the mistaken belief that spirochetes can be demonstrated but rarely in the aortic wall. Stadler considers it highly probable that excessive use of tobacco and of alcohol damages the vessel walls and predisposes them to invasion by the spirochete. Clinical diagnosis, treatment and prophylaxis in late syphilis in respect to cardiovascular involvement are presented in a rather too condensed form. Arrangement and typography are well adapted to reference work, and each section is concluded with an excellent summary of its main features. This work lacks that completeness and thoroughness of presentation which would entitle it to a position of authority.

Outline of the Cranial Nerves. By John Favill, A.B., M.D., F.A.C.P., Associate Clinical Professor of Neurology, Rush Medical College of the University of Chicago. Cloth. Price, $1.50. Pp. 112, with 14 illustrations. Chicago: University of Chicago Press, 1933.

This little book fills a definite need in the student's armamentarium. The data concerning the cranial nerves, which are exceedingly difficult to find in a convenient form in textbooks, are here presented in logical and systematic order. The information is accurate, and the latest material concerning the fifth and ninth nerves derived from results of operations has been incorporated. The author's interesting and valuable studies concerning the vestibular nerve and the relation of the eye muscles to the currents in the semicircular canals here become available. The student will find the book helpful, and it will be a convenience to the neurologist in teaching.

An Introduction to Dermatology. By Norman Walker, Kt., M.D., L.L.D., Consulting Physician for Diseases of the Skin, the Royal Infirmary, Edinburgh. Assisted by G. H. Percival, M.D., Ph.D., F.R.C.P., Assistant Physician for Diseases of the Skin, the Royal Infirmary, Edinburgh. Ninth edition. Cloth. Price, $7. Pp. 382, with illustrations. Baltimore: William Wood & Company, 1932.

Although the distinguished author still modestly considers this work an introduction to dermatology, in it he carries the reader far beyond the portals of the specialty. He makes of the book a personal exposition of the knowledge gained by his extensive experience of many years. This is especially true in his discussion of treatment. Here he is not satisfied with a mere listing of the methods of therapy, but for each he gives minute instructions for the preparation of the medicaments used and for their application. He discusses the indications and contraindications for various drugs, and among the latter he stresses the danger of using mercurial ointments on the skin of patients having an elevation of temperature, for in them there may be sufficient inhalation of the volatilized mercury to produce severe poisoning. In the main the author is very conservative in his statements, but in discussing seborrhea he states with confidence that the disease is caused by the spore of Malassez and also that psoriasis is the extremely dry form of seborrhea. Neither of these beliefs has met general approval. In this edition the discussion of the treatment of syphilis has been deleted because the treatment has become a matter for experts. It is to be hoped that this omission will call attention to the often forgotten fact that the treatment of syphilis involves more than the mere ability to inject drugs into the body. The book is well written and profusely illustrated and it deserves a place on every medical shelf.

A Short Practice of Surgery. By Hamilton Bailey, F.R.C.S., Surgeon, Royal Northern Hospital, and R. J. McNeil Love, M.S., F.R.C.S., Surgeon, Royal Northern and Metropolitan Hospitals, London. Volume I. Cloth. Price, 20s. Pp. 530, with 269 illustrations. London: H. K. Lewis & Company, Ltd., 1932.

A Short Practice of Surgery. By Hamilton Bailey, F.R.C.S., Surgeon, Royal Northern Hospital, and R. J. McNeil Love, M.S., F.R.C.S., Surgeon, Royal Northern and Metropolitan Hospitals, London. Volume II. Cloth. Price, 20s. Pp. 531-1005, with 349 illustrations. London: H. K. Lewis & Company, Ltd., 1932.

These two volumes are carefully compiled and may serve as an excellent source of concise surgical information for the student and the practitioner. The statement in the preface of the first volume, "In presenting this survey of general surgery we have endeavored to include only such material as is recent or which has been generally accepted," is adhered to throughout the entire book. There are numerous illustrations, which clarify the text. Each part of the body is discussed with the special pathologic processes most frequently encountered.

Office Surgery. By Fenwick Beekman, M.D., Visiting Surgeon, Bellevue Hospital. Everyday Practice Series. Edited by Harlow Brooks, M.D. Fabrikoid. Price, $3. Pp. 402, with 94 illustrations. Philadelphia & London: J. B. Lippincott Company, 1932.

Beekman has laid out a difficult task for himself in this little volume. Starting with the premise that "there is no lesser surgery" and "that surgical operations, though minor in character, should be performed in the hospital," he goes on to explain what may be done in the office. Tenorrhaphy and the surgical treatment of Dupuytren's contracture and of ganglion are taken up with the proviso that they should be done in the hospital. Although the book contains a great deal of information, it would have been still more useful if there had been a fuller discussion of finger fractures and the indications for the administration of tetanus antitoxin; moreover, the employment of local anesthesia in carbuncles in diabetic patients is of questionable advisability. However, Dr. Beekman's wide experience and learning make most of the volume valuable and interesting.

Les maladies des veines et leur traitement. Par G. Delater. Avec la collaboration de MM. R. Hügel, J. Saidman, J. Durand-Boisléard, M. Chailly et L. Sauvé, chirurgiens des hôpitaux de Paris. Paper. Price, 45 francs. Pp. 371, with 20 illustrations. Paris: Masson & Cie, 1932.

This is an interesting though somewhat philosophical dissertation on the diseases of the venous system. It is studded with ingenious hypotheses, some of which may stand the test of experimental or clinical evidence. Of the many suggestions may be mentioned the emphasis on normal venous peristalsis and its absence or diminution in certain types of individuals, and the explanation of pigmentation and dry peeling skin in phlebitis as being due to short reflexes from vein to skin. The injection treatment may interrupt these venous reflexes and thus improve the disorders of the skin. Varicose eczema is explained by sensitization accentuated by the stasis of antibody-antigen. The formation of edema is presented in the light of physiochemical factors influencing the retention of fluid in the tissues. A great deal of emphasis is laid on endocrine factors, a favorite subject of French authors. The spastic and organic arterial changes that accompany venous thrombosis are given full recognition. Latent pelvic thrombi are responsible for many of the deep thromboses following pelvic operations. Oral vaccines of B. coli and enterococcus are advised as a preventive measure. The distinction between creeping and metastatic phlebitis deserves consideration. The author injects in cases of intermittent claudication, injects two years after a deep phlebitis and one year after a superficial phlebitis, but obviously does not test for resting infection. This monograph hardly fills the need of the general practitioner who seeks simple and concise data on the subject. Those specially interested in this field may find a stimulating mass of observations, deductions and speculations, with which they can heartily agree or disagree.

Medicolegal

Privileged Communications Statute Construed

(Mississippi Power & Light Co. v. Jordan (Miss.), 143 So. 483)

The appellee, Jordan, injured his leg some years prior to the institution of this suit. In the course of his employment with the appellant company, he claimed to have bruised and injured his leg at the site of the old injury. He sued the company alleging that as a result he had become totally disabled and that his leg would have to be amputated. The company contended that Jordan had an osteomyelitis in his leg and that this condition had continued from the time of the prior injury to the present time. From a judgment against it, the company appealed to the Supreme Court of Mississippi, division b.

The company first assigned error in the refusal of the trial court to admit the testimony of a physician, practicing medicine in partnership with Jordan's attending physician, who did not personally attend him but who had visited him while he was confined in the hospital and had observed his condition. In contemplation of law, said the Supreme Court, this physician was as much the physician of the patient as was the attending physician. He was no more competent to testify than the attending physician would have been. Where two physicians practice medicine as a partnership, patients are patients of the firm and are entitled to have the privilege accorded by the statute forbidding the disclosure in court of confidential communications applied to both partners.

The company complained also of the trial court's refusal to admit the testimony of a physician who had treated Jordan's first injury and who had later employed him for some years. This physician stated that he could not separate his knowledge of the case obtained while attending Jordan, from what he learned, not as a physician, but through his contact with him as his employer. The trial court, said the Supreme Court, correctly ruled that this physician was incompetent to testify. It certainly would be narrowing the purpose of the statute with respect to privileged communications to permit a physician to testify as an expert who had attended a patient and who had gained an intimate knowledge of his condition under the confidence of a physician and patient. In such case, he would, naturally, give testimony as an expert based, to a considerable extent, on facts gained as the patient's physician. It would be an unsafe experiment to hazard or jeopardize confidential relations by this practice.

At the trial, the company offered to prove by two trained nurses, who attended the patient and who had dressed the injured leg when the attending physician treated him, that the ailment was chronic in character. The trial court permitted them to testify as to the condition of the leg as they saw it when it was dressed but refused to permit them to testify as

experts. The nurses, said the Supreme Court, were not qualified from their training to testify that the disease was chronic in character. Such testimony can be given only by a medical expert. For a witness to qualify as an expert, he must not only have a knowledge of different diseases and symptoms, but he must have had sufficient practical experience to enable him to discriminate between symptoms and conditions of different diseases. Ordinarily, a nurse is not a privileged witness as to what she sees and learns in her contact with patients, or as to communications made to her by patients. But where the information and knowledge of a nurse are gained by being present and assisting a physician and hearing communications between the physician and the patient, then her testimony is incompetent, for it is a part of the knowledge of the physician himself. As to all matters learned when not assisting a physician, a nurse is a competent witness. The rule, the court thought, is well stated in Wigmore on Evidence (ed. 2) vol. 5, par. 2381, reading, in part, as follows:

> As with the other privileges, however, the privilege forbids compulsory disclosure by that person only to whom the confidence was extended. It, therefore, does not exempt a third person overhearing the communication, from testifying to it, *except so far as the third person is an agent of the physican.*

The judgment in favor of Jordan was accordingly affirmed.

Latent Syphilis Activated by Burn

(Harder v. Thrift Const. Co. (Mo.), 53 S. W. (2d) 34)

In the course of his employment, Harder was burned in the arm with molten lead. Ten days later his mental condition appeared abnormal and the disturbance was first diagnosed as melancholy. The burn had healed sufficiently well in five weeks for him to be discharged as cured. His mental condition, however, gradually grew worse and some three months later it was diagnosed as general paralysis of the insane, attributed to syphilis. Death ensued and his widow was awarded compensation by the industrial commission, which held that the industrial accident activated a preexisting syphilitic condition, which in turn was the cause of the death. The employer and his insurance company eventually appealed to the St. Louis (Mo.) court of appeals.

The appellants complained of the action of the industrial commission in permitting a chiropractor to testify that a burn can affect the superficial nerves, resulting in an irritation of the nervous tract; and that it was very much of a possibility that the burn had produced his insanity. The testimony of the chiropractor, said the court of appeals, was competent. It went only to matters falling within the purview of the subjects of which the chiropractic practice act requires a chiropractor to be informed. Moreover, the appellants were in no position to object at this time to that testimony. It came in wholly without objection and part of it was elicited by the appellants' own counsel on cross-examining the chiropractor.

The appellants next denied liability for compensation where an industrial accident has aggravated or precipitated a preexisting condition without which the ultimate effect of the injury would have been slight or trivial. Bearing in mind, said the court, the humanitarian purpose of the workmen's compensation act and the liberal construction to be given its provisions, compensation under such circumstances should be granted. In the enactment of the Missouri compensation act the legislature saw fit to prescribe no standard of physical fitness to which an employee must conform. His right to compensation does not have its basis in any implied warranty of perfect health or freedom from latent and dormant tendencies to disease which may develop into positive and known conditions if incited and stimulated to activity by any accidental cause arising out of and in the course of his employment. The act is designed to afford protection to the weak as well as to the strong employees. In the practical application of the act, the disability or death for which compensation is to be given may just as legitimately be attributed to the accidental injury where undeveloped and latent physical conditions are set in motion and accelerated so to produce such final result, as where the same result follows directly from visible violence done to the physical structure of the body. The award of compensation to the widow was therefore affirmed.

Society Proceedings

COMING MEETINGS

American Medical Association, Milwaukee, June 12-16. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

American Academy of Pediatrics, Chicago, June 12-13. Dr. Clifford G. Grulee, 636 Church Street, Evanston, Ill., Secretary.

American Association for the Study of Goiter, Memphis, Tenn., May 15-17. Dr. J. R. Yung, 670 Cherry Street, Terre Haute, Ind., Secretary.

American Association for the Study of the Feeble-Minded, Boston, May 31-June 3. Dr. Groves B. Smith, Beverly Farms, Godfrey, Ill., Secretary.

American Association for Thoracic Surgery, Washington, D. C., May 9-11. Dr. Duff S. Allen, 3720 Washington Boulevard, St. Louis, Secretary.

American Association of Genito-Urinary Surgeons, Washington, D. C., May 8-10. Dr. Henry L. Sanford, 1621 Euclid Avenue, Cleveland, Secretary.

American Association of Medical Milk Commissions, Milwaukee, June 12-13. Dr. Harris Moak, 360 Park Place, Brooklyn, Secretary.

American Bronchoscopic Society, Washington, D. C., May 10. Dr. Edwin McGinnis. 104 South Michigan Boulevard, Chicago, Secretary.

American Climatological and Clinical Association, Washington, D. C., May 9-10. Dr. Arthur K. Stone, Auburn Street, Framingham Center, Massachusetts, Secretary.

American Dermatological Association, Chicago, June 8-10. Dr. W. H. Guy, 500 Penn Avenue, Pittsburgh, Secretary.

American Gastro-Enterological Association, Washington, D. C., May 8-9. Dr. John Bryant, 311 Beacon Street, Boston, Acting Secretary.

American Gynecological Society, Washington, D. C., May 8-10. Dr. Otto H. Schwarz, 630 South Kingshighway, St. Louis, Secretary.

American Heart Association, Milwaukee, June 13. Dr. Irl C. Riggin, 450 Seventh Avenue, New York, Executive Secretary.

American Laryngological Association, Washington, D. C., May 9-10. Dr. George M. Coates, 1721 Pine Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Chicago, June 8-10. Dr. Robert L. Loughran, 33 East 63d Street, New York, Secretary.

American Neurological Association, Washington, D. C., May 9-11. Dr. Henry A. Riley, 117 East 72d Street, New York, Secretary.

American Ophthalmological Society, Washington, D. C., May 8-10. Dr. J. Milton Griscom, 2213 Walnut Street, Philadelphia, Secretary.

American Orthopedic Association, Washington, D. C., May 8-10. Dr. DeForest P. Willard, 1916 Spruce Street, Philadelphia, Secretary.

American Otological Society, Washington, D. C., May 8-9. Dr. Thomas J. Harris, 104 East 40th Street, New York, Secretary.

American Pediatric Society, Washington, D. C., May 8-10. Dr. Hugh McCulloch, 325 North Euclid Avenue, St. Louis, Secretary.

American Proctologic Society, Chicago, June 12-13. Dr. Frank G. Runyeon, 1361 Perkiomen Avenue, Reading, Pa., Secretary.

American Psychiatric Association, Boston, May 29-June 2. Dr. Clarence O. Cheney, 722 West 168th Street, New York, Secretary.

American Society for Clinical Investigation, Washington, D. C., May 8. Dr. H. L. Blumgart, Beth Israel Hospital, Boston, Secretary.

American Society of Clinical Pathologists, Milwaukee, June 9-12. Dr. A. S. Giordano, 531 North Main Street, South Bend, Ind., Secretary.

American Surgical Association, Washington, D. C., May 8-10. Dr. Vernon C. David, 59 East Madison Street, Chicago, Secretary.

American Therapeutic Society, Milwaukee, June 9-10. Dr. Oscar B. Hunter, 1801 Eye Street, N.W., Washington, D. C., Secretary.

American Urological Association, Chicago, June 20-22. Dr. Gilbert J. Thomas, 1009 Nicollet Avenue, Minneapolis, Secretary.

Association for Research in Ophthalmology, Milwaukee, June 13. Dr. Conrad Berens, 35 East 70th Street, New York, Secretary.

Association for the Study of Allergy, Milwaukee, June 12-13. Dr. Warren T. Vaughan, 808 Professional Building, Richmond, Va., Secretary.

Association for the Study of Internal Secretions, Milwaukee, June 12-13. Dr. F. M. Pottenger, 1930 Wilshire Boulevard, Los Angeles, Secretary.

Association of American Physicians, Washington, D. C., May 9-10. Dr. James H. Means, Massachusetts General Hospital, Boston, Secretary.

Conference of State and Provincial Health Authorities, Washington, D. C., June 5-6. Dr. A. J. Chesley, State Department of Health, St. Paul, Secretary.

Congress of Physicians and Surgeons of North America, Washington, D. C., May 9-10. Dr. John T. King, Jr., 1210 Eutaw Place, Baltimore, Secretary.

Connecticut State Medical Society, Hartford, May 24-25. Dr. Charles W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Georgia, Medical Association of, Macon, May 9-12. Dr. Allen H. Bunce, 139 Forrest Avenue, N. E., Atlanta, Secretary.

Illinois State Medical Society, Peoria, May 16-18. Dr. Harold M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Des Moines, May 10-12. Dr. Robert L. Parker, 3510 Sixth Avenue, Des Moines, Secretary.

Maine Medical Association, Poland Springs, June 26-28. Dr. Philip W. Davis, 22 Arsenal Street, Portland, Secretary.

Massachusetts Medical Society, Boston, June 5-7. Dr. Walter L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Chicago, June 19-21. Miss Marjorie J. Darrach, 645 Mullett Street, Detroit, Secretary.

Medical Women's National Association, Milwaukee, June 11-12. Dr. Inez A. Bentley, 45 Gramercy Park, New York, Secretary.

Minnesota State Medical Association, Rochester, May 22-24. Dr. E. A. Meyerding, 11 West Summit Avenue, St. Paul, Secretary.

Mississippi State Medical Association, Jackson, May 9-11. Dr. T. M. Dye, Clarksdale, Secretary.

National Tuberculosis Association, Toronto, Canada, June 26-30. Dr. Charles J. Hatfield, Seventh and Lombard Streets, Philadelphia, Secretary.

Nebraska State Medical Association, Omaha, May 23-25. Dr. R. B. Adams, Center McKinley Building, Lincoln, Secretary.

New Hampshire Medical Society, Manchester, May 16-17. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.

New Jersey, Medical Society of, Atlantic City, June 6-9. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.
Oklahoma State Medical Association, Oklahoma City, May 15-17. Dr. C. A. Thompson, Commercial National Bank Building, Muskogee, Secretary.
Pacific Coast Oto-Ophthalmological Society, San Francisco, June 28-30. Dr. F. C. Cordes, Fitzhugh Building, San Francisco, Secretary.
Rhode Island Medical Society, Providence, June 3. Dr. J. W. Leech, 167 Angell Street, Providence, Secretary.
South Dakota State Medical Association, Huron, May 15-17. Dr. John F. D. Cook, Langford, Secretary.
Texas, State Medical Association of, Fort Worth, May 8-11. Dr. Holman Taylor, Medical Arts Building, Fort Worth, Secretary.
West Virginia State Medical Association, Charleston, May 22-24. Mr. Joe W. Savage, Professional Building, Charleston, Executive Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in continental United States and Canada for a period of three days. Issues of periodicals are kept on file for a period of five years only. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested). Periodicals published by the American Medical Association are not available for lending, but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

185: 1-148 (Jan.) 1933

*Control and Complete Remission of Polycythemia Vera Following Prolonged Administration of Phenylhydrazine Hydrochloride. H. Z. Giffin and E. V. Allen, Rochester, Minn.—p. 1.
Discussion of Rôle of Arterial Thrombosis in Visceral Diseases of Middle Life, Based on Analogies Drawn from Coronary Thrombosis. L. A. Conner, New York.—p. 13.
Familial Eosinophilia. S. G. Stewart, Philadelphia.—p. 21.
Vascular Crises. D. Riesman, Philadelphia.—p. 29.
Accumulation of Iron in Tuberculous Areas: III. Effect of Ferric Chloride Injections on Course of Development of Tuberculosis in Rabbits. V. Menkin, Boston.—p. 40.
Time and Dosage as Factors in Cure of Syphilis. H. S. Newcomer, Philadelphia.—p. 49.
*Macroscopic Examination of Blood: Discussion of Its Value and Description of Use of Single Instrument for Determination of Sedimentation Rate, Volume of Packed Red Cells, Leukocytes and Platelets and of Icterus Index. M. M. Wintrobe, Baltimore.—p. 58.
*Bilateral Cortical Necrosis of Kidneys: Angioneurotic Anuria. J. E. Ash, Washington, D. C.—p. 71.
Significance of Large Q Wave in Lead III. S. Strauss and L. Feldman, Chicago.—p. 87.
*Gaucher's Disease: Report of Two Cases, Remission in One Following Administration of Liver Extract. E. B. Potter and C. C. McRae, Ann Arbor, Mich.—p. 92.
Undulant Fever: Sources, Modes of Infection and Prophylaxis. C. M. Carpenter and Ruth A. Boak, Rochester, N. Y.—p. 97.
New Type of Duodenal Tube Tip. J. R. Twiss, New York.—p. 109.

Polycythemia Vera Following Administration of Phenylhydrazine Hydrochloride.—Giffin and Allen's experience with thirty-seven patients with polycythemia vera, who were observed from four to six years, shows conclusively that after the initial course of phenylhydrazine has been satisfactorily completed the disease frequently can be controlled by the administration of a small dose (from 0.1 to 0.4 Gm.) of the drug each week. This control in some instances has been accomplished by a dosage which has been shown to be ineffective experimentally so far as hemolysis is concerned (for example, 0.06 Gm. a month). This fact leads one to suspect that phenylhydrazine may have another effect on the blood picture, such as an inhibitory effect on the production of erythrocytes, although it is fairly well proved to have a stimulating effect on the production of leukocytes. This suspicion cannot at present be proved but is worthy of further consideration. Some of the patients after from two to four years of treatment have been able to dispense with the drug entirely and maintain a normal number of erythrocytes. Other patients have found it necessary to use the drug regularly; in some instances, subsequent courses of a daily dosage have been necessary. The occurrence of complete remission in some of the cases is apparently of especial significance. The untoward effects of phenylhydrazine are also considered; this phase of the subject was amplified in a report in THE JOURNAL, May 4, 1929, by Giffin and Conner. Phenylhydrazine should not be given if the diagnosis of polycythemia vera, with increased blood volume, cannot be well established.

Macroscopic Examination of Blood.—Wintrobe states that by the following consecutive steps it is possible to gain accurate and valuable information concerning the blood with the use of a modified hematocrit: 1. Five cubic centimeters of blood is drawn from a vein with a dry syringe and needle and placed in a small bottle containing 10 mg. of potassium oxalate, with which the blood is thoroughly mixed. 2. The hematocrit is filled to the 10 mark by means of a capillary pipet and the sedimentation rate is determined. The sedimentation rate serves as a guide to the presence and intensity of organic destructive or infectious disease. 3. The filled hematocrit is next centrifugated until no further packing of the corpuscles takes place. The volume of packed red corpuscles and the volume of packed leukocytes and platelets may then be read. The author does not recommend this method of employing the hematocrit as a substitute for more detailed microscopic or chemical studies but, in experienced hands, it can be made to indicate along what lines the further study of the blood should proceed. This may well be the first blood study in diagnostic clinics in which the technical personnel is too limited to permit the routine performance of erythrocyte, leukocyte and platelet counts as well as hemoglobin and van den Bergh tests. His experience has convinced him that the hematocrit affords more information concerning the blood than either the hemocytometer or the hemoglobinometer and that the information is more accurate. It is now his practice to use it in all diagnostic blood studies.

Bilateral Cortical Necrosis of Kidneys.—Sixty-two cases of bilateral cortical necrosis of the kidneys selected from the literature and two personally observed cases are analyzed by Ash. The condition occurs most commonly in pregnancy but is also seen in a variety of infectious diseases; it may follow trauma and it may develop cryptogenically. Bilateral cortical necrosis is a pathologic term applicable only to the terminal stage of certain cases of nonobstructive anuria. The author recommends that "angioneurotic anuria" be adopted as a clinical term to include all nonobstructive anurias. Treatment is of no avail in the pathologic condition of bilateral cortical necrosis, but there is evidence that decapsulation of the kidneys or nephrotomy will favorably influence an otherwise refractory angioneurotic anuria. The immediate cause or causes of bilateral cortical necrosis are not known, but it is most probable that the anuria is the result of vasomotor disturbance, probably a vasoconstriction that is followed by vasoparalysis and stasis, and that the striking picture of necrosis and thrombosis found post mortem is relatively terminal. Depending on conditions that are not understood, these terminal lesions may develop after a few hours of anuria, may be deferred for days or may not develop at all. In the last circumstance the patient may recover.

Gaucher's Disease.—Potter and McRae add two proved cases of Gaucher's disease to the reported cases, which now total over 100. One of their patients improved immediately following splenectomy, but no recent checkup has been possible. The other patient had bone lesions mistaken for osteomyelitis, and operation was done for this diagnosis. This patient was then given liver extract over an eleven months period with the occurrence of a remission characterized by symptomatic improvement, diminution in the size of the spleen and liver and improvement in the blood picture. Although lacking any knowledge of the modus operandi, the authors suggest liver extract in the treatment of Gaucher's disease.

Annals of Medical History, New York

5: 1-102 (Jan.) 1933

An Introduction to History of Women in Medicine: I. Medical Women Before Christianity. Kate Campbell Hurd-Mead, Haddam, Conn.—p. 1.
William Beaumont, M.D. (1785-1853). W. S. Miller, Madison, Wis.—p. 28.
Washington's Medical Knowledge and Its Sources. W. B. Blanton, Richmond, Va.—p. 52.
Why I Read Chaucer at Seventy. J. B. Herrick, Chicago.—p. 62.
Paleopathologic Evidence of Paget's Disease. H. S. Denninger, Chicago.—p. 73.
Jean Frederic Lobstein: The First Professor of Pathology. A. Brunschwig, Chicago.—p. 82.
Psychiatry in Historical Retrospect. F. M. Harrison, Brookline, Mass.—p. 85.

Annals of Surgery, Philadelphia

96: 961-1129 (Dec.) 1932

Fissures of Lungs. F. B. Berry and E. P. Childs, New York.—p. 961.
Lingual Thyroid. R. V. Grace and C. Weeks, New York.—p. 973.
Salivary Calculi. R. H. Ivy and L. Curtis, Philadelphia.—p. 979.
*Acute Empyema of Thorax: Immediate and Late Results in a Hundred Consecutive Cases. C. B. Rentschler, Reading, Pa.—p. 987.
Orbital Myositis and Choked Disk in Exophthalmic Goiter. J. S. Friedenwald, Baltimore.—p. 995.
*Perinephric Abscess. C. C. Higgins and N. F. Hicken, Cleveland.—p. 998.
Tuberculosis of Upper Segment of Duplicated Kidney. W. Walters and J. B. Priestly, Rochester, Minn.—p. 1014.
Malignant Tumors of Kidney in Infancy and Childhood. C. G. Mixter, Boston.—p. 1017.
Sarcoma of Kidney of the Adult: Review of Twenty Cases with Report of Case. E. S. Judd and J. M. Donald Rochester, Minn.—p. 1028.
Stannoxyl in Treatment of Chronic Recurring Osteomyelitis. J. E. Klein, Chicago.—p. 1032.
Postpyloric Ulcer Under Therapeutic Management of Internist, Radiologist and Surgeon. F. W. Bancroft and C. W. Lester, New York.—p. 1036.
Length and Position of Vermiform Appendix: Study of Four Thousand Six Hundred and Eighty Specimens. D. C. Collins, Rochester, Minn.—p. 1044.
Surgical Possibilities in Treatment of Anterior Poliomyelitis. A. Whitman, New York.—p. 1049.
*Operative Treatment of Paralytic Genu Recurvatum. W. C. Campbell and J. I. Mitchell, Memphis, Tenn.—p. 1055.
Chronic Tuberculous Polyarthritis. M. B. Cooperman, Philadelphia.—p. 1065.
Krukenberg Tumor of Ovary. H. W. Stephens, San Francisco.—p. 1078.
*Treatment of Pott's Fracture: Report Based on Fifty Cases. D. Goldblatt, New York.—p. 1083.
*Progressive Postoperative Cutaneous Gangrene. H. A. Patterson, New York.—p. 1091.
Radical Operations for Carcinoma of Breast: Preliminary Excision of Tumor or Ablation of Breast. C. Eggers, New York.—p. 1098.
Traumatic Lesions of Arteries: Indications for Therapeutic Ligation of Veins. J. deJ. Pemberton and J. M. McCaughan, Rochester, Minn.—p. 1103.

Acute Empyema of Thorax.—Rentschler states that of the 100 consecutive cases of acute empyema surgically treated at the Reading Hospital from 1920 to 1930, 10 patients died; 44 were discharged with the wound completely healed; 24 with slight drainage from a granulating sinus, and 22 with drainage material, chiefly a rubber tube, still in the pleural opening. At the present time, of the 90 patients who left the hospital alive, 82 answered that they were well and active, 2 were draining with recurrences, 2 are dead, and 4 could not be traced. The author believes that the 10 per cent mortality can be lessened. The open method of treatment either by rib resection or by intercostal drainage after the diagnosis is established clinically, roentgenologically and by diagnostic aspiration is an expedient method of treatment. This is particularly true in a hospital where the assistant and nursing staff are on a rotating system. It seems certain that too quick drainage is definitely more harmful than good. An acute pneumonic process should be given ample time to subside. In an extremely ill patient, when drainage is indicated, the decompression should be gradual, by aspiration, by closed intercostal tube drainage, and later, if indicated, by rib resection with digital exploration of the cavity and the insertion of open tubes. In an old primary empyema when the patient has well compensated himself to the condition, not much is gained by anything else except partial rib resection.

Perinephric Abscess.—Higgins and Hicken report a clinical study of thirty-two cases of perinephric abscess. Etiologically, the disease may be of renal or nonrenal origin. Pyonephrosis, nephrolithiasis, tuberculosis and carbuncles are the most common associated renal diseases, and bacterial metastases from peripheral and systemic foci of infection produce the nonrenal variety of perinephric infection. Fever, pain, leukocytosis and tenderness over the costovertebral angle are the most significant symptoms and these, together with a carefully elicited history, often lead to a correct diagnosis. Urinalysis is of some value in demonstrating associated renal disease but is of little importance in diagnosing perirenal disease of nonrenal origin. Roentgenography is useful in demonstrating the presence of coexisting diseases, but a diagnosis of perinephric abscess alone is seldom made by this method. The treatment is surgical and is governed by the condition of the patient, the location of the abscess, the presence of associated diseases and the complications. Conservative measures should be employed whenever possible.

Operative Treatment of Paralytic Genu Recurvatum.—Campbell and Mitchell point out that paralytic genu recurvatum results in most instances from a combination of muscular weakness and the static force of weight bearing. When due to anterior poliomyelitis, severe degrees of hyperextension of the knee occur usually in those patients in whom the paralysis is of a severe grade and wide distribution. The deformity is often associated with other deformities in the lower extremities and the trunk. The operation of fusion of the patella to the tibia in selected cases offers a technically simple and reliable method of treatment. The authors report seven cases, in one of which they performed the operation on both knees. The technic of the operation is as follows: An incision, 5 or 6 inches in length, is made over the patella and patellar ligament. The quadriceps tendon is divided above the patella by a Z-shaped incision. The capsule of the knee joint on either side of the patella is then incised and the patella retracted downward, exposing the interior of the joint. The ligamentum mucosum is divided and a portion of the infrapatellar fat pad is excised. The cartilage covering the lower third of the patella is removed to the spongy bone. The patellar tendon and the periosteum are stripped from the anterior surface of the patella for a distance of from one-half to three-fourths inch. A cavity is then made on the upper anterior aspect of the tibia by driving an osteotome vertically downward and prying forward the portion of the tibia anterior to the chisel. The patella is inserted into the depression on the tibia thus made, and the periosteum of the patella is sutured to the periosteum of the tibia about the margin of the cavity. The quadriceps tendon is reunited at neutral tension, the joint capsule sutured and the wound closed in layers. A cast is applied holding the knee at 160 degrees flexion. After eight weeks a brace with a stop-joint at the knee is applied and worn until roentgenograms demonstrate that bony fusion is complete. A modification of the original technic, in which the quadriceps tendon is not divided, has been employed by one of the authors in three cases.

Treatment of Pott's Fracture.—Goldblatt's series of fifty patients indicates that Pott's fracture is essentially an injury of adult life. The forces active in producing Pott's fracture in an adult will produce an epiphyseal separation of the lower end of the tibia in a child. The ratio of incidence among males and females was approximately three to one. Displaced or type I fractures require meticulous reduction and alinement to restore the highly specialized action of this joint and prevent dysfunction that may follow a poorly or irregularly healing cartilage, as a result of incorrect coaptation. Compounding with infection in the shaft of the bone is a regrettable occurrence; in a joint fracture it may become a tragedy, the ability to arrest infection being in indirect proportion to the duration of contamination. When maintenance of reduction is the difficulty, one should look for a fracture of the medial or interosseous malleolus of the tibia or a tearing away of the posterior lip of this bone. The use of skeletal traction may then be necessary. When this fails, operative removal of the fragment is indicated. The use of molded plaster-of-paris splints instead of a circular encasement permits visual and tactile inspection of the fractured site and promotes early passive activity. Physical therapy is an integral part of the treatment and should be concomitant with, rather than subsequent to, immobilization. Function may be consistent with deformity in a shaft fracture but is decidedly inconsistent with a joint fracture. Old fractures of the ankle with malunion and ankylosis require open correction and may prove disappointing. Nonunion here is a rarity. When it does occur it denotes interposition of soft parts, tendon, fascia or curled periosteum. Often under the best conditions, with the best of care, in frankly displaced or type I fractures, swelling and pain in the ankle will persist for a long time, as well as a widening of the joint, because of a tear of the lower tibiofibular ligament.

Progressive Postoperative Cutaneous Gangrene.—Patterson reports a personally observed case of progressive postoperative gangrene of the skin, of a type which represents a clinical entity. The lesion is unusual. It has a characteristic appearance, bacteriology and clinical course. The bacteriologic observations in his patient corresponded closely to those of Meleney. The process is produced by the symbiotic activity

of a small variety of streptococcus that prefers a low oxygen tension, and a staphylococcus. Although developing in a thoracotomy incision, the streptococcus in this case (as in most reported cases) was thought to be of intestinal origin. Conservative measures are of no help whatever in dealing with this type of infection. The treatment of choice is early wide excision, with cautery or with scalpel. Adequate excision results in prompt cure. The use of tension sutures in drained incisions predisposes to the development of this alarming complication.

Archives of Surgery, Chicago

26: 1-168 (Jan.) 1933

Experimental Obstructive Jaundice: Its Effect on Fibrinogen and Coagulation of Blood. W. Moss, New Orleans.—p. 1.
Roentgenology of Experimental Mesenteric Vascular Occlusion. J. S. Hibbard, P. C. Swenson and A. G. Levin, New York.—p. 20.
*Establishment of Circulation in Tubed Skin Flaps: Experimental Study. W. German, New Haven, Conn.; E. M. Finesilver, Newark, N. J., and J. S. Davis, Baltimore.—p. 27.
*Path of Infection in Perinephritis. H. C. Rolnick, Chicago.—p. 41.
Resection of Sensory Nerves of Perineum in Certain Irritative Conditions of External Genitalia. J. R. Learmonth, H. Montgomery and V. S. Counseller, Rochester, Minn.—p. 50.
*Acute Abdominal Symptoms in Arachnidism. C. B. Morton, University, Va.—p. 64.
*Ligation of Saphenous Vein: Report on Two Hundred Ambulatory Operations. G. de Takáts and L. Quillin, Chicago.—p. 72.
*Tribrom-Ethanol as Anesthetic for General Surgery. H. K. Ransom, Ann Arbor, Mich.—p. 89.
Splenectomy in Treatment of Hemorrhagic Purpura. J. M. Askey and C. G. Toland, Los Angeles.—p. 103.
Passage of Cholesterol Through Mucosa of Gallbladder. A. L. Wilkie and H. Doubilet, Montreal, Canada.—p. 110.
Effects on Composition of Blood of Physiologic Solution of Sodium Chloride When Introduced by Intraperitoneal Injection and by Stomach Tube in Presence of Low Blood Pressure. J. W. Beard, H. Wilson and A. Blalock, Nashville, Tenn.—p. 122.
Absorption of Dextrose from Colon. W. W. Ebeling, Philadelphia.—p. 134.
Selective Staining of Diseased Areas in Cartilage by Intra-Articular Injection of Dyes: Experimental Cadaver Study, with Especial Reference to Arthroscopy. M. S. Burman, New York.—p. 153.
Forty-Ninth Report of Progress in Orthopedic Surgery. J. G. Kuhns, E. F. Cave, S. M. Roberts and J. S. Barr, Boston; J. A. Freiberg, Cincinnati; J. E. Milgram, New York; G. Perkins, London, England, and P. D. Wilson, Boston.—p. 160.

Circulation in Tubed Skin Flaps.—German and his associates have successfully tried out the clinical application of the information obtained in their experimental study on tubed flaps during the last three years. It has also been of value in determining the time of division of the pedicles in those long pedicled flaps which are raised and without being tubed are immediately sutured back into the bed from which they came until ready for transfer. The longer the tubed flap is allowed to remain intact, within certain limits, the more stable the blood supply becomes, but from their observations, both clinical and experimental, they are convinced that the establishment of circulation in tubed skin flaps occurs considerably earlier than was previously thought possible and consequently that it is safe to divide the pedicles sooner.

Infection in Perinephritis.—Rolnick reports seven cases illustrating the various modes of invasion in perinephritis. One of the paths of extension of infection is that along the periureteral sheath, of which little mention has been made in the literature. His experiments for the purpose of determining the accuracy of the various clinical observations are as follows: Fresh postmortem specimens of kidneys, ureters and bladders were used. The specimens were from both males and females, children and adults. In the male the adnexa were attached. A contrast fluid of from a 25 to 30 per cent solution of sodium bromide was injected into the ureteral sheath, and the specimen was then roentgenographed. Injections were made in the fascia at the base of the bladder near the ureter or within the sheath of the seminal vesicle. In others, injection was made directly into the ureteral sheath, beginning at the juxtavesicular portion of the ureter and extending upward. In a few specimens the injections within the sheath were begun at the renal pelvis and carried downward. In practically all instances, the contrast fluid could be forced readily upward or downward along the sheath of the ureter. In the female, infiltration of the loose tissues at the base of the bladder permitted the forcing up and milking upward of the contrast medium in the ureteral sheath. The author believes that his clinical and experimental observations should be of particular interest to gynecologists and urologists. There are many clinical observations by both gynecologists and urologists of adnexal and pelvic infection causing infection of the upper urinary tract. The demonstration of extension of infection along the sheath of the ureter is of decided clinical importance. Bands and adhesions about the ureter and renal pelvis, periureteritis, peripyelitis and perinephritis, acute and chronic and of varying degrees of severity, including perinephric abscess, may result from extension of infection along the sheath of the ureter secondary to pelvic infection in both male and female.

Acute Abdominal Symptoms in Arachnidism.—Morton presents six cases of arachnidism, a poisoning from the bite of Latrodectus mactans, or "black widow" spider. In some instances the spider bite had occurred without the patient's knowledge. The symptoms were characterized by the acute onset of severe abdominal pain, nausea and vomiting, boardlike rigidity of the abdominal muscles with more or less tenderness, and elevation in the patient's temperature and leukocytes. The author draws attention to the ease with which the mistaken diagnosis of acute surgical abdominal disease might be made and the patient subjected to an unnecessary exploratory laparotomy.

Ligation of Saphenous Vein.—On the basis of 200 ambulatory vein ligations combined with the injection treatment for varicose veins, de Takáts and Quillin think that this procedure has a definite place in the treatment for this condition. The high saphenous ligation protects the treated veins from the fluctuations of abdominal and hydrostatic pressure, thus preventing canalization of the thrombi. It also reduces the necessary number of injections and places the occluding ligature close to the saphenofemoral junction. By insisting on a short proximal stump and on ambulatory management, they can report no embolism in the entire series. The complications reported in their series all seem avoidable with growing experience. The end-results of the operation combined with injections show a far smaller percentage of recurrences than those obtained with any other procedure in the treatment for varicose veins. Their technic for ambulatory vein ligation is as follows: In the standing position the course of the vein is marked out with a 2 per cent solution of brilliant green. The skin is shaved dry just before the operation and prepared with ether, iodine and alcohol. The line of incision in high saphenous ligations runs about a handwidth distally and parallel to Poupart's ligament and should start mesially to the palpable femoral artery. The line of incision is infiltrated with a 0.5 per cent solution of procaine hydrochloride with 3 drops of 1:1,000 epinephrine to each ounce. Only a superficial subcutaneous infiltration is made, and repeated aspirations are made for blood because care must be taken not to inject any procaine hydrochloride intravenously. In one patient only a few drops of procaine hydrochloride were sufficient to produce pallor, tachycardia and numbness of the lips and fingers. After an interval of about five minutes, for complete anesthesia, incision is made through the skin and subcutaneous fat. In some patients a strong tortuous anterior branch lies immediately under the skin and needs no further exposure. This may not be the main trunk but a collateral from the superficial epigastric, overcoming a previous iliac block. At this high level the main trunk lies below the superficial fascia and has to be exposed at a depth of from 2 to 4 cm., or sometimes even more. When the main vein is exposed, a perivenous injection is made on both sides of the vein. Two ligations, made by curved artery forceps or an aneurysm needle armed with number 1 chromic catgut insinuated under the vein twice, are tied at a distance of 3 cm. or more and the segment of vein is lifted up to detect communicating branches from the deep veins, which should also be carefully tied, as they may produce a profuse hemorrhage. It is important to place the proximal ligature as close to the femoral junction as possible, a short stump being left. The segment of vein is then removed and used for bacteriologic study. Before the wound is closed, the patient is asked to cough a few times to catch, if necessary, additional bleeders. The skin is closed with interrupted dermal sutures. The skin around the incision is painted with a mastic solution (gum mastic 40 Gm., benzene 60 cc., castor oil 20 drops, and sufficient distilled water to make 100 cc.) and gauze is stuck to the skin with the solution. The patients return for inspection in forty-eight hours, and the stitches are

removed on the eighth day. They may return to work after the first inspection. They should not stay in bed during the day for any time.

Tribrom-Ethanol as Anesthetic for General Surgery.—Ransom analyzes a representative group of 430 surgical cases in which he used tribrom-ethanol for anesthesia or basal narcosis. The quality of surgical anesthesia produced by tribrom-ethanol unassisted or supplemented by gas or ether was entirely satisfactory. The induction from the standpoint of the patient is probably less unpleasant than that attendant on any other form of anesthetic. Some form of supplemental anesthetic, such as nitrous oxide and oxygen or ether, was required in 70 per cent of the cases, the operation in the remaining 30 per cent being performed without reinforcement. While there was usually a preliminary fall in both systolic and diastolic blood pressure, this did not seem to be sufficient to cause alarm, and at the conclusion of the operation the pressure had practically reached the preoperative level. Falls in blood pressure were satisfactorily combated with ephedrine or epinephrine. When nitrous oxide and oxygen were employed as a supplemental agent, the percentage of oxygen in the mixture could be increased to about twice the amount possible when used with nitrous oxide alone. Likewise, if ether was used to supplement the tribrom-ethanol, the total quantity employed during the operation was considerably less than would have been required for straight ether anesthesia. The average reaction time was two and one-half hours. The majority of the patients reacted between one and three hours, while about 23 per cent reacted in less than one hour. Of the twenty-two operative deaths occurring in the series, only four seemed to have any definite relation to the type of anesthesia. In the entire series there were only eight cases of postoperative pulmonary complications which seemed in any probability attributable to the tribrom-ethanol. Of these, four were of pneumonia, and of these four postoperative pneumonias two were fatal. In order to avoid unnecessary dangers, it seems that considerable care should be exercised in selecting cases. If this is done, tribrom-ethanol, in the author's opinion, is not only a safe but an important addition to the anesthetic armamentarium.

Arkansas Medical Society Journal, Little Rock

29: 165-179 (Jan.) 1933

Convulsive Seizures: Their Treatment. G. E. Tarkington, Hot Springs National Park.—p. 165.
Spinal Anesthesia. C. B. Capel, Pine Bluff.—p. 168.

Canadian Medical Association Journal, Montreal

28: 1-122 (Jan.) 1933

Diseases of Duodenum and Their Treatment. D. C. Balfour, Rochester, Minn.—p. 2.
Atypical Forms of Encephalitis. A. H. Gordon, Montreal.—p. 8.
Angina Pectoris in Young People, Associated with Rheumatic Carditis: Report of Case. W. W. Eakin, Montreal.—p. 13.
*Pneumoperitoneum Following Laparotomy. F. I. Lewis, Toronto.—p. 18.
Production of Hyperplasia of Thyroid, with Hyperthyroidism in Albino Rat: Preliminary Report. Evelyn M. Anderson, Montreal.—p. 23.
Congenital Hypertrophy of the Thyroid Gland: Report of Case. D. S. Mitchell and R. R. Struthers, Montreal.—p. 27.
Critical Analysis of Radiotherapy in Treatment of Malignant Tumors. G. Forssell, Stockholm, Sweden.—p. 30.
Prognosis in Cardiac Disorders. R. D. Rudolf, Toronto.—p. 35.
Sympathectomy for Tic Douloureux. R. E. McKechnie, Vancouver, B. C. —p. 41.
*Occipitoposterior Position. J. D. McQueen, Winnipeg, Manit.—p. 42.
Some Observations in Treatment of Hyperemesis Gravidarum: Case Reports. J. Mann, Toronto.—p. 48.
*Spinal Anesthesia in Children. C. I. Junkin, Toronto.—p. 51.
*Treatment of Chronic Nasal Sinusitis. J. G. Hunt, London, Ont.—p. 54.
*Transfusion of Blood: Report of Two Hundred and Six Cases from Clinic of the Woman's Hospital in the State of New York. W. R. Esdale, Ottawa, Ont.—p. 57.
Biopsy. B. T. Simpson, Buffalo.—p. 62.

Pneumoperitoneum Following Laparotomy. — Lewis points out that the possibility of air remaining in the abdominal cavity after suture of the peritoneum appears to have been generally overlooked. Factors influencing the enclosure of air in the peritoneum are: the type of anesthesia used, supplemental anesthesia, length and position of the abdominal incision, position of the patient on the operating table and drainage of the peritoneal cavity with tubes. From experiments on animals and from one observation on a patient in whom 1,000 cc. of air was introduced into the peritoneal cavity following aspiration of ascitic fluid, the author observed that the air was completely absorbed from the peritoneal cavity in ten days. From his observation of twenty-five cases following spinal anesthesia and fifteen following gas-oxygen and ether, the author concludes that pneumoperitoneum after laparotomy is of frequent occurrence in those cases in which spinal anesthesia alone is used. It is occasionally found after operations in which general inhalation anesthesia is used. It is of great importance that the possibility of its presence be recognized for the correct diagnosis of postoperative complications and to allow appropriate treatment of the symptoms due to its presence. The production of postoperative pneumoperitoneum can be prevented by bringing the table to a flat position just previous to the closure of the peritoneum and by forcing respirations for a few moments with carbon dioxide. Abdominal percussion is an unreliable method of demonstrating pneumoperitoneum. Distention of the right large intestine is frequently the cause of loss of liver dulness. Delay in absorption of the enclosed air is due to the position in which the patients lie in bed.

Occipitoposterior Position. — From the study of the records of 654 private cases admitted consecutively, McQueen concludes that in the management and treatment of occipitoposterior positions the following points should be taken into consideration: 1. Early diagnosis is necessary for proper management. 2. Successful labor often depends on the conservation of the patient's energies during the first stage. 3. The obstetrician should be constantly aware of the progress of labor. 4. Unnecessary operative intervention should at all times be deprecated. 5. When no disproportion exists, an occipitoposterior position will, with average uterine contractions, in the majority of cases, rotate spontaneously to the front and be delivered naturally or with the aid of low forceps. 6. When intervention becomes necessary, manual rotation, when performed at the opportune time, would appear to be the most natural, simple and the safest procedure to follow. 7. Forceps should not be applied until the head is well engaged.

Spinal Anesthesia in Children. — Junkin utilized spinal anesthesia in performing various orthopedic operations on the lower extremities of children, such as Hoke's arthrodeses, tendon fixations, excisions of the knee, amputations, reductions of congenital dislocations of the hip, osteotomies of the femurs and tibias, reductions of fractures of the femur, fixations of the hip, and sequestrectomies of varying extent. His technic of lumbar puncture and injection is the same as that in general use for adults. He presents a table giving the dosage and premedication necessary for children up to the age of 17 years. He concludes that spinal anesthesia is as safe and as satisfactory in children as in adults, if not more so. A preliminary sedative is an important and necessary adjunct to successful anesthesia. Spinal anesthesia is definitely indicated for operations below the diaphragm in children suffering from advanced pulmonary or renal disease. Spinal anesthesia is to be preferred to other anesthetics for splenectomies, nephrectomies, lumbar sympathectomies and intestinal obstructions, and for orthopedic operations on the lower limbs in which complete muscular relaxation is desirable.

Chronic Nasal Sinusitis.—According to Hunt, if the growing spirit of pessimism in regard to their ability to cure chronic sinusitis is to be exorcised, there must be a more general recognition by rhinologists that the real cause of both local catarrhal and remote organic and constitutional symptoms is the presence within certain of the paranasal cells of a germ-infested, fibrosed or polypoid mucosa; that medical treatment of the nasal cavity is purely symptomatic in character and it is absurd and immoral to raise false hopes of a cure by this means when the disease is well established; that nasal operations for the relief of obstructive breathing caused by chronic sinusitis are irrational, and, when associated with postoperative packing, dangerous. The indiscriminate attempt to cure all types of chronic antrum disease by nasal puncture and lavage is more illogical than trying to flush polyps from the nasal cavity or diseased tonsils from their bed. Success in radical sinus surgery will vary in direct proportion with the ability of the surgeon to locate the diseased cells and his thoroughness in removing all the infected mucosa of all affected cells.

Transfusion of Blood.—Esdale presents a statistical study of 206 transfusions in gynecologic operative cases, in which he employed the direct method, using the Unger and Scannel

machines. The average amount of blood used was 500 cc. All interns of recognized hospitals should be experts in blood typing and transfusion, preferably by the direct method. Blood transfusion overcomes the shock of hemorrhage. Acacia dextrose is an effective means for combating surgical shock and should be given early, before the vital centers are damaged; it is indicated for an unconscious patient. By the transfusion of 500 cc. of blood an increase of half a million red blood cells and a 10 per cent increase in hemoglobin may be anticipated. The white blood count is not appreciably affected by transfusion. It is safe to perform transfusion on a patient suffering from an internal hemorrhage before operation, as the blood pressure is not increased. Reactions occur in 28 per cent, mostly chilly sensations; 4 per cent are severe in character.

Delaware State Medical Journal, Wilmington

5: 1-22 (Jan.) 1933

Congenital Syphilis. M. J. Exner, New York.—p. 1.
*Intra-Urethral Correction of Urinary Bladder Neck Obstruction. B. S. Vallett, Wilmington.—p. 8.

Intra-Urethral Correction of Urinary Bladder Neck Obstruction.—Vallett reports twenty cases of intra-urethral resection and reviews the early results. Intra-urethral resection of bladder neck obstructions is undergoing a thorough trial. In his opinion the technic of resection, as now practiced according to the McCarthy and Davis method, is undoubtedly the most valuable adjunctive treatment in prostatism since Young's classic perineal operation. The method greatly shortens hospitalization and is the method of choice in many poor risks. Infection and not hemorrhage is the bugbear of intra-urethral resection and must be combated by vasectomy and a meticulous bladder toilet before operation. The same preoperative care as for open operation should be given. Intra-urethral resection is the operation of choice in carcinoma of the prostate, relieving obstruction, controlling hemorrhage, and causing retardation and regression of the growth. Intra-urethral resection is less likely than open operation to disturb the sexual function. Intra-urethral resection will have a mortality rate as high as or higher than the open operation, owing to the fact that more men will submit to it than to open operation. Physical examination of all men over 45 is not complete without the test for residual urine. In the final solution of the problem of prostatism, prophylaxis will play a major part; that is, early detection of cases and possibly the administration of an inhibiting hormone.

Georgia Medical Association Journal, Atlanta

22: 1-42 (Jan.) 1933

Rickets. M. Blanchard, Columbus.—p. 1.
Common Cold. A. J. Waring, Savannah.—p. 4.
*Intracranial Birth Hemorrhages. C. M. Burpee, Augusta.—p. 7.
Carcinoma of Colon. M. J. Egan, Savannah.—p. 15.

Intracranial Birth Hemorrhages.—According to Burpee, intracranial hemorrhages are responsible for many of the deaths that occur during the first few days of life and most of the paralyses seen in childhood. They are frequently not recognized at birth. They occur most frequently in the premature infant or the infant subjected to a long and difficult labor, and particularly when instrumentation, podalic version with breach extraction or solution of pituitary is used to terminate this type of labor. They are always due to intracranial trauma. The hemorrhage may occur anywhere inside the skull, but subdural hemorrhages are the most important. The symptoms depend on the size and location of the hemorrhage. The prognosis depends not only on the size and location of the hemorrhage but on the type of treatment instituted. The treatment consists in prevention, as far as possible, by appropriate prenatal care. All prolonged or difficult labors should be considered potential cases of intracranial hemorrhage and treated as such. Respiration should be stimulated by a mixture of carbon dioxide and oxygen rather than by violent resuscitation measures. In all cases of intracranial hemorrhage or suspected intracranial hemorrhage, absolute rest should be prescribed, and external heat should be applied when necessary. The increased intracranial pressure should be relieved and the respiration maintained. The body fluids should be maintained and, above all, the infant should be watched closely. In large supratentorial hemorrhages the blood clot may be removed if adequate surgical facilities are available.

Journal of Bacteriology, Baltimore

25: 1-100 (Jan.) 1933

Antony van Leeuwenhoek: The Three Hundredth Anniversary of His Birth. E. B. Fred, Madison, Wis.—p. 1.

Journal of Bone and Joint Surgery, Boston

15: 1-278 (Jan.) 1933

Operative Arrestment of Longitudinal Growth of Bones in Treatment of Deformities. D. B. Phemister, Chicago.—p. 1.
Early Treatment of Congenital Dislocation of Hip. V. Putti, Bologna, Italy.—p. 16.
*Operative Fixation of Tuberculous Hips in Children: End-Result Study of Thirty-Three Patients from Orthopedic Department of Children's Hospital. J. C. Wilson, Los Angeles.—p. 22.
Report of Seventeen Cases of Tuberculosis of Hip Fused by Wilson Method. L. Alpert, Middleboro, Mass.—p. 48.
Combined Intra-Articular and Extra-Articular Arthrodesis for Tuberculosis of Hip Joint. M. S. Henderson, Rochester, Minn.—p. 51.
Treatment of Osteomyelitis by Bacteriophage. F. H. Albee, New York.—p. 58.
Production of Chronic Arthritis by Injection of Weak Acids, Alkalis, Distilled Water and Salt Solution into Joints. J. A. Key, St. Louis.—p. 67.
Maggots in Treatment of Osteomyelitis: Simple Inexpensive Method. D. C. McKeever, Kansas City, Mo.—p. 85.
Use of Colloidal Sulphur in Treatment of Arthritis. T. F. Wheeldon and R. J. Main, Richmond, Va.—p. 94.
Short Metatarsal Bones and Their Relation to Poliomyelitis. A. B. Ferguson, New York.—p. 98.
Amputation Stumps of Lower Extremity. N. T. Kirk, Washington, D. C.—p. 101.
*Certain Arthritic Disturbances Associated with Parathyroidism. R. V. Funsten, University, Va.—p. 112.
Parathyroidism in Reference to Orthopedic Surgery. M. Ballin, Detroit.—p. 120.
*Hyperparathyroidism: Distinct Disease Entity. W. Bauer, Boston.—p. 135.
*Rôle of Parathyroid Glands in Diseases Associated with Demineralization of Human Skeleton. E. L. Compere, Chicago.—p. 142.
Considerations on Use of Parathyroidectomy for Arthritis. I. W. Nachlas, Baltimore.—p. 151.
Correction of Compressed and Impacted Fractures of Vertebrae. J. Dunlop and C. H. Parker, Pasadena, Calif.—p. 153.
*Operation to Make Posterior Bone Block at Ankle to Limit Foot-Drop. A. B. Gill, Philadelphia.—p. 166.
Congenital Metatarsus Varus. C. W. Peabody and F. Muro, Detroit.—p. 171.
Paget's Osteitis Deformans in Relation to Cardiovascular Disease. S. M. Cone, Pikesville, Md.—p. 190.
Osteitis Tuberculosa Multiplex Cystica (Jungling): Report of Case Involving the Larger Long Bones with Complete Proof of Its Tuberculous Etiology: Review of Literature. G. S. van Alstyne and G. H. Gowen, Chicago.—p. 193.
Fracture of Capitellum and Trochlea, Combined with Fracture of External Humeral Condyle. R. C. Robertson and F. B. Bogart, Chattanooga, Tenn.—p. 206.
Stresses in Curved Column. F. A. Chandler, Chicago.—p. 214.
Stability of Hip Following Whitman's Reconstruction Operation. A. Inclan, Havana, Cuba.—p. 215.
Lengthening of Femur with Simultaneous Correction of Coxa Vara. S. L. Haas, San Francisco.—p. 219.
Osteochondritis of Internal Cuneiform. J. Buchman, Brooklyn.—p. 225.
Operation for Recurrent Dislocation of Shoulder. P. W. Roberts, New York.—p. 233.
Case of Complete Dislocation Between Fifth and Sixth Cervical Vertebrae, Without Fracture. E. N. Reed, Santa Monica, Calif.—p. 235.
Dislocation of Single Cuneiform Bone. D. F. Clark and H. A. Quint, Evanston, Ill.—p. 237.
Carpometacarpal Arthroplasty of Thumb. R. Patterson, Knoxville, Tenn.—p. 240.
Old Dislocation of Shoulder: New Instrument for Reduction. W. A. Clark, Pasadena, Calif.—p. 242.
Improved Apparatus for Russell Traction. D. O. Chamberlain, Brooklyn.—p. 246.
Modification and Extended Uses of Bradford Frame. G. M. Logan, Akron, Ohio.—p. 248.

Operative Fixation of Tuberculous Hips in Children.—Wilson reports the results of iliofemoroplasty in thirty-three children, who have been under observation from one to eight years. An additional ten to fifteen years of observation will be essential before it can be definitely recommended that all tuberculous hips in children should be fused in a position of 15 degrees of flexion and 10 degrees of abduction. He believes that early fusion of tuberculous joints conserves the growing elements of the bone, thereby eliminating the disability due to shortening. He has confirmed the observation of Hibbs that fusion of the bone flap or strut is followed by consolidation of the diseased area. Joint tuberculosis will heal rapidly when motion is eliminated. This may be successfully accomplished by iliofemoroplasty. Draining sinuses are not a contraindication to iliofemoroplasty. The sinuses will close when the bone and joint lesion is healed. Secondary infection is of no practical importance so far as the operation itself is concerned.

The general physical condition of the patient is uniformly good after ankylosis of the diseased joint takes place. Iliofemoroplasty is not a difficult technical procedure and it may be done without danger to life. Iliofemoroplasty is suitable for any child, irrespective of age, who is suffering from tuberculosis of the hip joint and is known to be a good surgical risk.

Arthritic Disturbances Associated with Parathyroidism. — Funsten performed parathyroidectomy in fourteen of twenty-six cases of arthritis presenting symptoms of parathyroidism. Only one of the cases failed to show improvement. Nine patients showed marked improvement. Within a day or two following operation, the sensation of stiffness in the joints began to disappear and there was less pain and more ease of motion. Four patients were moderately improved. The shortest postoperative observation was four months. The longest period of observation has been eighteen months. The remaining twelve patients (the poor operative risks and mild cases) were treated conservatively with cod liver oil concentrate, calcium gluconate, physical therapy and orthopedic appliances. Of these, eight improved and four showed no improvement. The author concludes that parathyroid disease is frequent in arthritis, either as a primary cause or secondarily as the result of a common etiologic factor. It may be recognized by symptoms of paroxysmal pain in the spine and abdomen, deformity of the spine and roentgen evidence of demineralization. The diagnosis may be substantiated by means of repeated blood and urine calcium determinations and chronaxia.

Hyperparathyroidism. — Bauer states that hyperparathyroidism or generalized osteitis fibrosa cystica is a clear-cut, distinct disease entity caused by an increased secretion of parathyroid hormone. The fact that it is a disease of endocrine origin implies that the entire skeleton is affected. Arthritis and Paget's disease are never generalized skeletal diseases. This fact alone argues against their being of parathyroid origin. Hyperparathyroidism is a disease characterized by definite alterations in the calcium and phosphorus metabolism, such as an elevated serum calcium, a decreased serum phosphorus, and an increased calcium and phosphorus excretion. Some of the characteristic symptoms and signs of hyperthyroidism are polydipsia, polyuria, weakness and loss of strength, constipation, loss of appetite, loss of weight, indefinite muscle and joint aches and pains, bone tenderness, frequent fractures, decreased excitability of the nerves, skeletal shortening, kyphosis, kidney or ureteral stones, generalized decalcification, bone tumors, multiple bone cysts, fish-type vertebral bodies, and frequently anemia with leukopenia. The author concludes that until there is sufficient evidence to prove that Paget's disease and certain cases of arthritis are due to hyperparathyroidism, there is no justification in advising parathyroidectomy in patients with either disease.

Parathyroids in Diseases with Demineralization of Skeleton.—According to Compere, generalized osteitis fibrosa may be differentiated from other skeletal dystrophies that are clinically similar. This condition is characterized by a high serum calcium content, low plasma phosphates, increased excretion of calcium in the urine, and negative calcium balance; an adenomatous tumor of one or more parathyroids has always been found at postmortem examination and nearly always at operation, while the remaining glands are normal in size and structure. There is no good evidence that Paget's disease is caused by hyperparathyroidism. In this condition the calcium and inorganic phosphate contents of the blood are normal; and the parathyroids are usually found to be entirely normal in size and in microscopic structure. Ankylosing polyarthritis is probably not caused by hyperparathyroidism, because although the serum calcium may be slightly above normal, the inorganic phosphates of the plasma are normal; the calcium balance is positive; the parathyroids have been reported enlarged, but usually this enlargement was symmetrical, involving all the parathyroids similar to that reported in cases of rickets or low calcium osteomalacia. In experimental animals the addition of vitamin D and of adequate calcium and phosphorus to the diet has resulted in a decrease in the size of the enlarged parathyroids as well as healing of the skeletal disease. Parathyroidectomy in cases of ankylosing polyarthritis or of Paget's disease is not a justifiable procedure. Demineralization of the skeleton in polyarthritis may be accounted for as atrophy of disuse.

Posterior Bone Block at Ankle, Limiting Foot-Drop. —Gill uses a posterior bone block operation for foot-drop that has not been corrected at the time of a fusion operation and in cases in which a strong achilles tendon is not balanced by anterior muscles. His technic is as follows: A skin incision is made parallel to the achilles tendon. The latter is exposed and divided Z-fashion. An incision is made longitudinally through the underlying fat, which is scraped to both sides to expose the posterior aspect of the ankle joint and the top of the os calcis. The ankle joint is opened. The foot is dorsiflexed to the limit of motion. With a broad, thin osteotome the cartilage, with a thin portion of bone of the astragalus, is lifted upward from behind until it comes into contact with the posterior lip of the tibia. The angle of the wedgelike space thus formed lies well forward beneath the cartilage and in front of the posterior lip of the tibia. A wedge-shaped piece of bone is then removed from the upper aspect of the os calcis and is driven firmly into the space beneath the superior portion of the astragalus. It will then be observed that the foot is maintained firmly in a position of dorsiflexion. The achilles tendon is sutured with the necessary amount of lengthening. The skin wound is closed with number 0 or 1 twenty-day chromic gut. The foot is dressed in plaster in slight dorsiflexion for three months.

Journal of General Physiology, Baltimore

16: 397-557 (Jan. 20) 1933

Action of Roentgen Rays on Euplotes Taylori and Associated Bacteria. M. G. Brown, J. M. Luck, Grace Sheets and C. V. Taylor, Stanford University, Calif.—p. 397.

Visual Intensity Discrimination of Honey Bee. E. Wolf, Cambridge, Mass.—p. 407.

Distribution of Action Currents Produced by Heart Muscle and Other Excitable Tissues Immersed in Extensive Conducting Mediums. F. N. Wilson, A. G. Macleod and P. S. Barker, Ann Arbor, Mich.—p. 423.

Electrokinetic Phenomena: X. Electric Mobility and Charge of Proteins in Alcohol Water Mixtures. Janet Daniel, Cambridge, Mass.—p. 457.

Rate of Oxygen Consumption by Fertilized and Unfertilized Eggs: IV. Chaetopterus and Arbacia Punctulata. D. M. Whitaker, Stanford University, Calif.—p. 475.

Id.: V. Comparisons and Interpretation. D. M. Whitaker, Stanford University, Calif.—p. 497.

Kinetics of Penetration: V. Kinetics of Model as Related to Steady State. W. J. V. Osterhout, New York.—p. 529.

Journal of Immunology, Baltimore

24: 1-91 (Jan.) 1933

Use of Intradermal Test in Diagnosis of Trichiniasis. O. R. McCoy, J. J. Miller, Jr., Rochester, N. Y., and R. D. Friedlander, San Francisco.—p. 1.

Further Studies in Serum Sickness: IV. Effect of Concentration of Normal Horse Serum on Antibody Response. L. Tuft, with technical assistance of Anna M. Rule, Philadelphia.—p. 25.

Reticulo-Endothelial System and Source of Opsonin. A. R. Elvidge, Montreal, Canada.—p. 31.

Studies of Scarlet Fever: I. Allergic Versus Toxin-Antitoxin Hypothesis. S. B. Hooker, Boston.—p. 65.

Studies in Tobacco Hypersensitivity: I. Comparison Between Reactions to Nicotine and to Denicotinized Tobacco Extract. Marion B. Sulzberger, with assistance of B. Scholder and E. Feit, New York.—p. 85.

Journal of Industrial Hygiene, Baltimore

15: 1-56 (Jan.) 1933

Further Research on Production of Carbon Monoxide from Paint in Sealed Compartments. S. F. Dudley, F. G. Edmed and R. C. Frederick, Greenwich, Conn.—p. 1.

Influence of Respiration and Transpiration on Ionic Content of Air of Occupied Rooms. C. P. Yaglou, L. Claribel Benjamin, and A. Brandt, Boston.—p. 8.

Importance of Velocity Characteristics in Design of Local Exhaust Hoods. J. M. Dallavalle.—p. 18.

*Study of Seventy-Eight Workers Exposed to Inhalation of Cryolite Dust. S. V. Gudjonsson, Copenhagen, Denmark.—p. 27.

Air Cooling by Conduction and Convection. W. S. Weeks and F. G. de Berry, Berkeley, Calif.—p. 34.

Control of Silicosis Hazard in Hard Rock Industries: IV. Application of Kelley Trap to Underground Drilling Operations. T. Hatch, Boston; J. W. Fehnel, New York; H. Warren, Boston, and G. S. Kelley, New York.—p. 41.

Inhalation of Cryolite Dust. — On examination of the local conditions in a factory where cryolite is crushed, Gudjonsson found that most of the working processes were accompanied by the production of mineral dust, cryolite, containing only 3 per cent of quartz, and that in some parts of the plant the dust production was marked. On examination of seventy-eight workers who had been employed in the factory for over two years, forty showed various degrees of silicosis—up to the

second stage. The development of silicosis appeared to be in direct relation to the time the workers affected had been working in the place, and not in direct relation to their age. The total sick rate during the last years has increased among the workers with silicosis. This applies especially to diseases of the lungs—in this group of diseases the total sick rate is more than three times as high among silicotic workers as among nonsilicotic workers. Signs of pulmonary tuberculosis were demonstrated in four of the workers examined, but they were not confined to silicotic workers.

Journal of Pediatrics, St. Louis

2: 1-132 (Jan.) 1933

Pediatric Psychology and Child Guidance Movement. J. Brennemann, Chicago.—p. 1.
Congenital Occlusion of Duodenum and Small Intestine: Clinical Consideration with Report of Two Successful Cases. R. F. Carter, New York.—p. 27.
Significance of Obscure Abdominal Pain in the Older Child. F. W. Schlutz, Chicago.—p. 41.
What is Dementia Praecox? Esther L. Richards, Baltimore.—p. 46.
Parasitic Infections in New Orleans, Based on Cross Section of Charity and Welfare Clinic Patients, with Especial Reference to Children's Clinics. E. C. Faust, New Orleans.—p. 53.
Chloroma. P. Rosenblum, Chicago.—p. 59.
Antiques of Pediatric Interest. T. G. H. Drake, Toronto, Canada.—p. 68.
Teeth and Nourishment. G. S. Millberry, San Francisco.—p. 70.

Journal of Pharmacology & Exper. Therap., Baltimore

47: 1-139 (Jan.) 1933

*Anesthetic Action of Divinyl Oxide on Humans. S. Gelfan and I. R. Bell, Edmonton, Alta., Canada.—p. 1.
*Anesthetic Action of Divinyl Oxide in Animals. C. D. Leake, P. K. Knoefel and A. E. Guedel, San Francisco.—p. 5.
Administration of Drugs into Cerebral Ventricles of Monkeys: Pituitrin, Certain Pituitary Fractions, Pitressin, Pitocin, Histamine, Acetyl Choline and Pilocarpine. R. U. Light and S. M. Bysshe, Boston.—p. 17.
Response of Rabbit to Pilocarpine Administered into Cerebrospinal Fluid. R. U. Light, C. C. Bishop and L. G. Kendall, Boston.—p. 37.
*Tribrom-Ethanol Narcosis in Treatment of Lung Edema Induced by Chemical Irritation. A. R. Koontz and C. H. Moulton, Edgewood, Md.—p. 47.
Carbazol Derivatives: I. Local Anesthetics of Urethane Type. P. K. Knoefel.—p. 69.
Pressor Action of Yohimbine and Quebrachine. S. J. Weinberg, Baltimore.—p. 79.
Influence of Anesthesia on Cerebrospinal Fluid Pressure Response to Histamine and Epinephrine. S. J. Weinberg, Baltimore.—p. 95.
Effect of Sodium Isoamylethylbarbiturate (Sodium Amytal) on the Depressor Action of Brain Extract. R. H. Major, C. J. Weber and J. B. Nanninga, Kansas City, Kan.—p. 107.
Comparison of Bronchodilating Action of Several Antiasthmatic Agents After Anaphylactic and Histamine Shock in Guinea-Pig. O. W. Barlow and A. J. Beams, Cleveland.—p. 111.
Chemistry of Blood and Cerebrospinal Fluid, with Especial Reference to Calcium, in Cataleptoid State Induced by Bulbocapnine: Combined Effect of Bulbocapnine and Some Other Drugs. S. Katzenelbogen and M. C. Meehan, Baltimore.—p. 131.

Anesthetic Action of Divinyl Oxide in Man.—In studying the action of divinyl oxide on human beings, Gelfan and Bell first administered divinyl oxide, by the drop method, to one of the authors for a period of ten minutes. The subject was completely unconscious nine minutes after the beginning of the induction: partial analgesia was present after four minutes, complete analgesia after seven minutes and complete muscular relaxation in the arms and legs after ten minutes, at which time the anesthetic was discontinued. Two minutes after the removal of the mask, the subject had fully recovered. He immediately rose and walked about briskly with perfect coordination. The pulse remained normal throughout. Eight minutes after the removal of the mask, 150 cc. of water was ingested and retained. There was no nausea or vomiting at any time. About one hour later, food was taken with normal appetite and with no after-effects. About 20 cc. of the anesthetic was used during the ten minutes. During two subsequent trials there were no signs of excitement or struggling during the induction or during recovery. The authors emphasize the fact that the divinyl oxide was administered at a considerably slower rate than the usual rate of administration of diethyl ether in clinical cases and that, in spite of the rate of administration, the time required to induce anesthesia was considerably shorter than that required with diethyl ether. Divinyl oxide is not unpleasant to inhale. The induction with divinyl oxide is impressively smooth, prompt and even, and the recovery rapid. Deep and regular respiration may be noticed shortly after the beginning of the induction.

Anesthetic Action of Divinyl Oxide in Animals.—In experiments on mice and dogs with pure divinyl oxide, Leake and his associates observed that although it is inflammable and explosive like ether it has advantages over ether which recommend it as a general inhalation anesthetic agent for clinical evaluation. It is more volatile than ether and more powerful and rapid in its anesthetic action. It is less irritating, and its general physiologic actions are less severe. It has no significant pathologic effect when administered without anoxemia. Recovery is more prompt than from ether and apparently less attended with nausea or other evidence of physiologic distress. It may be administered by any technic used for ether. On the basis of the experimental evidence so far accumulated, divinyl oxide deserves clinical study to determine whether or not it has practical clinical advantages over the anesthetics now in common use. Divinyl oxide, on exposure to light and air, may polymerize or partially decompose with the appearance of formaldehyde and formic acid. Such material, of course, would be dangerous for anesthetic purposes.

Tribrom-Ethanol Narcosis in Treatment of Lung Edema.—Koontz and Moulton used various doses of calcium chloride and calcium lactate (given orally by stomach tube) in the treatment of edema of the lungs caused by gassing with phosgene, both in rabbits and in dogs. A considerable decrease in the edema was secured by this therapy, but no reduction in the death rate was effected. The use of tribrom-ethanol (100 mg. per kilogram of body weight) was then tried as a method of treatment in dogs. The narcosis produced kept the animals quiet for a number of hours after gassing. Occasionally the dose was repeated twenty-four hours later. The method effected a marked reduction in the amount of edema of the lungs and reduced the percentage of deaths by half.

Laryngoscope, St. Louis

43: 1-80 (Jan.) 1933

Anatomy of Eighth Nerve: Central Projection of Nerve Endings of Internal Ear. R. Lorente de No, St. Louis.—p. 1.
*Free Iodine in Treatment of Vasomotor Rhinitis and Symptom Complex of Sneezing and Nasal Hydrorrhea: Preliminary Report. M. Levine, Brooklyn.—p. 39.
Red Septum. D. C. Jarvis, Barre, Vt.—p. 42.
*Nasal Mucous Membrane as Indicator of Faulty Body Chemistry: Pale Septum. I. Frank, Chicago.—p. 48.
Biophysics and Chemistry in Otorhinology. E. R. Lewis, Los Angeles.—p. 54.
Head Injuries and Ear Disturbances. A. J. Guerinot, Pittsburgh.—p. 61.
Spontaneous Rupture of Sigmoid Portion of Lateral Sinus. J. A. Flynn, Washington, D. C.—p. 65.

Free Iodine in Treatment of Vasomotor Rhinitis.—Levine reports favorable results in twenty cases of vasomotor rhinitis, in twenty cases of the early stage of common cold and in ten cases of hay fever from the use of subcutaneous injections of a 5 per cent solution of sodium iodide containing traces of free iodine. This treatment proves of value whenever the mucous membrane of the nose is waterlogged and appears to act by regulating the water output of the nose. Repeated injections are harmless except in laryngitis. He gave injections every two or three days until the symptoms subsided completely. As a rule, about six injections were required; in the more obstinate cases, as many as ten.

Pale Septum.—Frank states that in general practice there is no ready clinical method of discovering faulty acid-alkali balance in the body. The existing methods of finding excessive systemic acid or alkali are tedious and time consuming and require technical skill. It would be desirable to have a rapid, reliable clinical test, by which one could determine at a glance whether the nutritional state is faulty on the acid or alkaline side. Fortunately, such a sign seems to be available by inspection of the mucous membrane covering the cartilaginous nasal septum. The individual with excessive alkaline-ash residue, subject to colds, respiratory infections, hay fever and asthma, presents a nasal septum mucosa that is pallid and edematous. Consequently by the inspection of the nasal septum mucosa one may derive valuable information concerning the individual's acid-alkali balance. In every instance a careful history should be obtained concerning the patient's food habits, to confirm and substantiate the rhinologic examination. In individual persons in whom the symptoms are due to an excessive acid ash diet, alkaline-ash foods should be substituted and suitable

alkalis should be administered. For an individual whose alkaline-ash intake has been excessive, suitable dietary correction should be made. The author concludes that he has found these signs of value in diagnosis and an important guide in treatment.

Medical Annals of District of Columbia, Washington

2: 1-22 (Jan.) 1933

Splenic Ruptures. V. J. Dardinski, Washington.—p. 1.
Headache from Standpoint of Neurologist. A. Schneider, Washington.—p. 5.
Headache from Standpoint of Rhinologist. S. A. Alexander, Washington.—p. 7.
Value and Indications of Intravenous Injections in Pediatrics. R. A. Bier, Washington.—p. 9.

Medical Journal and Record, New York

137: 45-88 (Jan. 18) 1933

Treatment of Gonorrhea in the Male by American Urologists. A. L. Wolbarst, New York.—p. 45.
Hepaticocholangiogastrostomy: Presentation of Case and Discussion. R. F. Elmer and C. E. Boylan, Chicago.—p. 48.
Menstrual Irregularities and Ductless Glands: Mechanism of Menstruation and Its Significance in Practical Therapy. C. A. Wright, Los Angeles.—p. 52.
Actinomyces Infections That Occurred at New York Hospital During Years 1916 to 1931: Report of Cases. M. Kerlan, Beverly Hills, Calif.—p. 54.
Growth Retardation Due to Untoward Confinement. I. Rod, Washington, D. C.—p. 57.

New York State Journal of Medicine, New York

33: 65-130 (Jan. 15) 1933

Relation of Exophthalmos to Nasal Sinus Disease. R. W. Hawkins, Rochester.—p. 65.
Exophthalmos: Its Ocular Symptoms. H. H. Joy, Syracuse.—p. 68.
Id.: Its Pathology and Ocular Manifestations. A. B. Reese, New York.—p. 73.
Id.: Its Surgical Treatment. W. W. Weeks, New York.—p. 78.
Clinical Picture of Unilateral Infarction of Medulla. E. L. Hunt and G. H. Grant, New York.—p. 83.
Artificial Light in Tuberculosis. G. G. Martin, Buffalo.—p. 85.
Superspecialization in Neuropsychiatry. I. J. Sands, Brooklyn.—p. 88.
*Therapeutic Use of Antipoliomyelitis Serum in Preparalytic Cases of Poliomyelitis. W. H. Park, New York.—p. 91.
Serum Treatment of Meningitis. Josephine B. Neal, New York.—p. 94.
*Use of Convalescent Serum in Treatment of Measles, Chickenpox, Mumps and Whooping Cough, Including Prophylactic Value of Parental Blood. J. M. Lewis and L. H. Barenberg, New York.—p. 97.

Antipoliomyelitis Serum in Poliomyelitis.—Park presents a study of the results of preparalytic poliomyelitis patients treated with convalescent serum. From his study he concludes that there was little or no statistical evidence of any difference between the serum treated and untreated patients with preparalytic poliomyelitis as observed by the pediatricians serving under the Poliomyelitis Committee of the Academy of Medicine and by those observing the cases in the hospitals for communicable diseases in the city. The slight difference in favor of the untreated patients may be attributable to the accidental inclusion of a somewhat larger number of graver infections in the treated patients. The results of the two controlled investigations indicate that, whenever possible, one should treat only a portion of the cases with serum and should make an equally careful observation of the cases not treated. In this way one may finally come to a conclusion whether the serum is of any value at a time when the spinal cord is already invaded by the virus of poliomyelitis. The author thinks that the treatment with convalescent serum cannot be given early enough to be of value as a preventive, just as in the case of children recently infected by the measles virus.

Serum in Measles, Chickenpox, Mumps and Whooping Cough.—Lewis and Barenberg point out that the high morbidity and mortality associated with measles in infants and young children, particularly those housed in institutions, urges the use of a procedure that will either prevent or modify this disease. To accomplish this end, Nicolle and Conseil in 1918 recommended the serum of patients convalescing from measles. The authors gave sixty-four children 6 cc. of convalescent measles serum obtained either ten days or thirty days after defervescence. Forty-four, or 73 per cent, remained completely protected. Of the sixteen children who developed the disease, fourteen came down with a markedly attenuated form of measles. The thirty-day serum appeared to be just as potent as the ten-day serum. Of the thirteen infants exposed to chickenpox, five received 30 cc. of whole blood and eight received 40 cc. of serum from a professional donor. The infants who received 30 cc. of blood developed chickenpox in a mild form, but not one of the eight infants who received 40 cc. of serum came down with the disease. In the treatment of forty children who were exposed to mumps, they gave 12 cc. of blood (5 cc. of serum) obtained from patients convalescing from mumps. Six of the forty treated children developed mumps, an incidence of 15 per cent, whereas 49 of 125 control children developed the disease, an incidence of 39 per cent. In the whooping cough group the authors gave 30 cc. of normal adult blood to six children exposed to the disease, but all of the six children developed whooping cough of lesser severity than that of the control group. They conclude that, if one is desirous of preventing measles, chickenpox or mumps and convalescent serum cannot be obtained, the serum of adults who have had these diseases should be employed and complete protection may be expected in a large percentage of cases. Adult blood is also of value in modifying the course of whooping cough.

Public Health Reports, Washington, D. C.

48: 63-87 (Jan. 20) 1933

*Pellagra-Preventive Value of Autoclaved Dried Yeast, Canned Flaked Haddock and Canned Green Peas. G. A. Wheeler.—p. 67.

48: 89-112 (Jan. 27) 1933

Rat Infestation of Ships Out of Commission. C. L. Williams.—p. 89.

Pellagra-Preventive Value of Yeast, Haddock and Peas.—In his study on pellagra-preventive foods carried out in a state hospital, Wheeler tested dried bakers' yeast (autoclaved), canned flaked haddock and canned green garden or English peas for their pellagra-preventive potency. He observed that dried bakers' yeast is a good source of the pellagra-preventive factor, and its potency is retained after heating in the steam autoclave at 15 pounds pressure for seven and one-half hours. Canned flaked haddock contains the pellagra-preventive factor but in an amount so small that a relatively large proportion is required to supplement adequately an otherwise pellagra-producing diet. He describes some less commonly observed symptoms associated with the use of an intermediate allowance of the haddock and discusses their significance. Canned green peas supply the pellagra-preventive factor and may be found a highly practical and convenient source of this essential in the pellagrous sections during the spring months when pellagra-preventive supplements are not easily obtained.

Southwestern Medicine, Phoenix, Ariz.

17: 1-42 (Jan.) 1933

Highway Accidents and Their Care by Doctors and Hospitals. F. D. Vickers, Deming, N. M.—p. 1.
*Tissue Reactions to Tubercle Bacillus. J. W. Flinn, Prescott, Ariz., and Z. M. Flinn, Albuquerque, N. M.—p. 2.
Inflammatory Stricture of Ureter in Female. L. M. Miles, Albuquerque, N. M.—p. 4.
Urology in Infancy and Childhood. K. D. Lynch and R. F. Thompson, El Paso, Texas.—p. 11.
Granuloma Coccidioides: Primary Cutaneous Lesion, Treatment with Actual Cautery: Report of Case. S. W. Imerman and C. P. Imerman, Los Angeles.—p. 18.
Some Trends in Medical Economics. W. W. Watkins, Phoenix, Ariz.—p. 21.
Treatment of Vincent's Angina. B. H. Britton, El Paso, Texas.—p. 28.
Maternal and Child Hygiene in County Health Unit. Estella Ford Warner, Portland, Ore.—p. 28.

Tissue Reactions to Tubercle Bacillus.—According to the Flinns, tissue reactions to the tubercle bacillus are principally manifested in the activities of the monocyte, the lymphocyte and the neutrophil. The monocyte is the primary aggressor. It acts first as a phagocyte. Later it becomes converted into an epithelioid cell and forms the greatest part of a primary tubercle. In the healing process it plays a less conspicuous part but is associated with the lymphocyte and acts as a scavenger of inflammatory products. The lymphocyte is definitely associated with the healing process, but in exactly what way has not yet been demonstrated. The neutrophil plays the chief part in purely tuberculous suppuration. All these reactions are quite accurately reflected in differential counts of the circulating blood.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Experimental Pathology, London

14: 1-56 (Feb.) 1933

Studies of Skin Reactions to Specific Soluble Substances of Pneumococcus Types I and II. J. M. Alston and A. S. R. Lowdon.—p. 1.
Heterotransfer of Two Filtrable Tumors: Investigation by Means of Resistance Induced by Embryo Tissue. W. J. Purdy.—p. 9.
*Serum Bilirubin: II. Relationship Between Bilirubin Content of Serum from Different Types of Jaundice and Icterus Index of Serum After Removal of Proteins. F. D. White.—p. 17.
Modern Tests of Liver Efficiency Applied to Experimental Shale Oil Liver Necrosis. C. Polson.—p. 24.
Parallel Action of Neutral Salts on Inhibition of Complement and Dispersion of Gelatin. J. Gordon and F. C. Thompson.—p. 33.
Optimal Proportions in Agglutination: Reference to Antigenic Analysis of Brucella Group of Organisms. A. A. Miles.—p. 43.

Serum Bilirubin.—White gives the name residual icterus index to the icterus index when determined on serum from which the proteins have been removed by precipitation with alcohol. He shows that, in serum artificially rendered icteric by the addition of bilirubin, the residual icterus index is directly proportional to the bilirubin content in milligrams per hundred cubic centimeters, the ratio being approximately 6 to 1. He has obtained results indicating that, within the limits of this investigation, this relationship also holds for the serum of normal persons and of patients with jaundice of hemolytic origin but does not hold for other types of jaundice. The icteric ratio of serum is defined as the ratio of the icterus index to the residual icterus index. In normal serum and icteric serum of hemolytic origin this icteric ratio has been found to be generally less than 1:2, whereas in all other jaundice cases investigated it was almost invariably much higher. The author suggests that, since this ratio is easily and quickly determined in cases of latent or slight jaundice, it might prove of assistance in differentiating such cases into "hemolytic" and "nonhemolytic" categories. A further differentiation of the latter category into "obstructive" and "toxic" types has not been found possible by this method. It is claimed that the generally accepted normal values for serum bilirubin are too low and that the normal range is at least from 0.5 to 1 mg. and possibly from 0.5 to 1.5 mg. per hundred cubic centimeters of serum.

British Journal of Ophthalmology, London

17: 65-128 (Feb.) 1933

Superficial Punctate Keratitis. J. H. Doggart.—p. 65.
Scotomas in Migrainous Subjects. T. H. Butler.—p. 83.
Trachoma in Fiji: Original Investigation. R. Stuppel.—p. 88.
Aphakic Stereoscopic Vision, with Note on Synoptophore. J. Foster and Audrey S. Jackson.—p. 98.

British Medical Journal, London

1: 47-86 (Jan. 14) 1933

*Use of Hydnocarpates and Morrhuates Intradermally in Lupus Vulgaris: Observations. L. Rogers.—p. 47.
Inhibitory Action of "Alepol" on Growth of Tubercle Bacilli in Besredka's Fluid Egg Medium. S. L. Cummins and C. Weatherall.—p. 48.
Etiology of Hodgkin's Disease, with Especial Reference to Bacillus Tuberculosis-Avis. C. E. van Rooyen.—p. 50.
Atypical Hodgkin's Disease. E. G. B. Calvert and H. H. Sanguinetti.—p. 52.
Physiologic and Clinical Results of Division of Vas Deferens. A. C. Morson.—p. 54.
Rôle of Minerals and Vitamins in Growth and Resistance to Infection. A. Brown and F. F. Tisdall.—p. 55.
Value of Cesarean Section in Preeclamptic Toxemia. Margaret M. Basden.—p. 58.

Hydnocarpates and Morrhuates in Lupus Vulgaris.—Rogers states that his experience in treating extensive nodular lesions due to leprosy, by injecting hydnocarpates directly into them, led him to try intradermal injections of ester morrhuates and hydnocarpates in the treatment of a chronic case of lupus vulgaris. He commenced treating the thickened edge of a shoulder lesion by injecting a drop or two of ethyl ester morrhuate intradermally at several neighboring points at each sitting. This enabled him to test the effect of the injections in an unexposed part of the body. The results were beneficial. He soon extended the treatment to the thickened margins on the face and neck, with similar beneficial results. As progress with the morrhuates was slow, he used instead the more active ethyl ester hydnocarpate in the form of "moogrol," combined with a 4 per cent solution of creosote as an antiseptic. The administration of the hydnocarpates was followed by the appearance of some fresh ulceration in the older, uninjected, central parts of the cheeks. This he regarded as a reaction in the diseased tissues similar to the swelling and softening of leprous dermal lesions following intravenous or intramuscular injections of the same drug. He therefore returned to the morrhuates for a time. Subsequently he continued the treatment with the hydnocarpates alone and found that the reactions in the central portions became milder and that an increasing number of points could be injected at a sitting, with more rapid improvement. At the end of a year the thickened diseased areas had nearly all disappeared, and the intervals between the injections were increased. The author has the patient under observation to determine whether the improvement will be permanent.

Edinburgh Medical Journal

40: 1-56 (Jan.) 1933

Chronic Alcoholism and Its Treatment. D. K. Henderson.—p. 1.
Corrigan's Original Description of Aortic Regurgitation: Reference to Some Matters of Historical Interest. E. Bramwell.—p. 13.
The Need of a Course in Medical Genetics in Medical Curriculum: Pivotal Point in Eugenic Program. Madge Thurlow Macklin.—p. 20.
Outbreak of Infectious Jaundice: Report of Investigation. G. M. Elliott and C. P. Beattie.—p. 31.

Indian Medical Research Memoirs, Calcutta

No. **26:** 1-144 (Jan.) 1933

Investigation into the Value of Etherized Vaccine in Prophylactic Treatment of Rabies: Part VIII. Comparative Immunizing Value of Carbolized, Etherized-Carbolized and Etherized Vaccines Tested Under Identical Conditions of Dosage and Administration. J. Cunningham, R. H. Malone and A. C. Craighead.—p. 1.

Lancet, London

1: 65-122 (Jan. 14) 1933

Phlebitis. A. D. Wright.—p. 65.
*Masked Hyperthyroidism as Cause of Heart Disease. J. R. H. Towers.—p. 67.
Anemia of Carcinoma of Stomach. S. J. Hartfall.—p. 74.
Diabetes Mellitus and Insipidus: Associated in One Case. R. D. Lawrence and R. A. McCance.—p. 76.
Dermatitis Following Wearing of Dyed Fabrics. E. M. Killick and J. T. Ingram.—p. 77.
Progressive Postoperative Gangrene of Skin. F. H. Scotson.—p. 80.

Masked Hyperthyroidism as Cause of Heart Disease.—Towers presents an account of fifteen patients, all of whom may be described as cases of hyperthyroidism masked as heart disease. All were women. The average age was 52 years and the average duration of the symptoms was 3.8 years. The majority were apathetic in appearance, of good nutrition, and quite unlike the classic picture of exophthalmic goiter. The diagnosis was indicated by the suddenness of the apex beat, presence of extrasystoles with a rapid rate, presence of paroxysmal auricular fibrillation, the roentgen appearance of the heart, and increase in the pulse pressure. Thyroid enlargement was absent in ten patients, in two a slight fulness was noted only when the patient was made to swallow in the sitting posture, and in two a dense calcified nodule was present, though its significance had not been recognized. A slightly staring expression was noted in two cases, and pigmentation of the skin was seen in three. Some loss of weight occurred at some time in the majority of cases but was never marked. Estimation of the basal metabolic rate, if it is raised, is of great value as a means of confirming the diagnosis. In five patients there was pain in the chest of anginal nature and thyrotoxicosis occurred; in four the pain was felt at the onset of the attacks of palpitation, and as the latter were the result of thyroid toxicity, and appeared to precipitate the pain, such pain must be regarded as a symptom of this condition. The authors explain its frequency in their series on the grounds of the age incidence; i. e., an age at which atheroma of the coronary arteries is commonly present. The thyrotoxicosis must then be regarded as an etiologic factor of the pain only as it leads to an increased demand for work on the part of the heart, in the same way as does exertion or emotion. They report two cases in which high blood pressure was present but in which the symptoms were due to an associated thyrotoxicosis. In both patients, operation entirely relieved the symptoms but left the pressure unchanged. The failure of rest and digitalization to affect the condition is of diagnostic value. Iodine is often of value as a therapeutic test when it is first given. This effect,

though often striking, was always transitory, and later the drug had no effect. The patient appears to become refractory to it. The authors make a plea for the earlier recognition of these cases because of their comparative frequency, their difficulty of diagnosis and their amenability to treatment.

Medical Journal of Australia, Sydney

1: 137-170 (Feb. 4) 1933

Some Problems in Diagnosis and Treatment of Genito-Urinary Tuberculosis. H. Moore.—p. 137.
Working Hypothesis of Roentgen-Ray Effect, with Especial Reference to Saturation Technic. E. W. Frecker.—p. 143.
Treatment of Adherent and Deficient Palates. W. J. Denehy and A. Amies.—p. 150.

Chinese Medical Journal, Shanghai

46: 1159-1254 (Dec.) 1932

Early Signs of Toxemia of Pregnancy in Chinese Patients. A. Wong and A. Pillat.—p. 1159.
Treatment of Schistosomiasis Japonicum with Fouadin in Experimentally Infected Rabbits. C. U. Lee.—p. 1169.
Histologic Observations in Experimental Schistosomiasis Japonicum. R. Hoeppli.—p. 1179.
Note on Forces of Mortality and Their Classification in Peiping. J. B. Grant and I. C. Yuan.—p. 1187.
Foerster's Operation for Spastic Paralysis of Lower Extremities: Report of Case. S. T. Kwan and Y. L. Ch'eng.—p. 1190.
Tumor Clinic of Peiping Union Medical College. J. W. Spies.—p. 1198.
Simple Egg Medium for Cultivation of Bacillus Diphtheriae. S.-E. Pai.—p. 1203.

"Gann," Japanese Journal Cancer Research, Tokyo

26: 315-391 (Dec.) 1932

Growth of Chicken Sarcoma in Body of Mosquito After Sarcoma Agent Has Been Sucked from Blood of Chicken by Mosquito. S. Macuoka and J. Jabuûci.—p. 315.
Primary Carcinoma with Seminoma Developing Simultaneously: Case. M. Sato.—p. 341.
Establishment of Cancer Laboratory and Hospital by Japanese Society of Cancer Research. M. Nagayo.—p. 362.

Japanese Journal of Obstetrics and Gynecology, Kyoto

15: 431-513 (Dec.) 1932

Relation Between Action of Quinine to Rabbit Uterus in Situ and Suprarenal Capsule. H. Morimoto.—p. 432.
Relation Between Action of Morphine to Rabbit Uterus in Situ and Suprarenal Capsule. H. Morimoto.—p. 437.
Effect of Suffocation and Carbonic Acid Gas on Organs of Nonstriated Muscles. H. Morimoto.—p. 443.
Histologic Investigation of Digestive Tract of Human Fetus. D. Cho.—p. 457.
Morphologic Changes in Plaster Figures of Vaginal Cavity Before and After Operation for Uterine Retroflexion. J. Nakagawa.—p. 471.
Physicochemical Change of Blood in Gynecologic Diseases: Part III. Changes in Physicochemical Nature of Blood During Menstrual Period, Especially Observations in Patients of Hypoplasia Uteri. M. Ikeda.—p. 480.
Statistical Observations on Formation of Embolism and Thrombosis in Obstetrics and Gynecology. H. Matsuoka.—p. 487.
Improvement of Tracheal Catheter for Obstetric Use. H. Fujimori.—p. 493.
Statistic Observation of Adolescent Primipara. K. Ueda.—p. 499.
Obstetric Research of Gigantic Children. J. Nakagawa.—p. 504.
*Newly Discovered Symptom for Diagnosis of Anencephalus. Y. Katsu.—p. 507.

Diagnosis of Anencephalus.—Katsu states that the uncertain symptoms in anencephalus are: (1) the palpability of spongy soft tissues which are surrounded by the projection of cranial bone; (2) the abnormal projection of the eyeballs; (3) the palpability of bony substance in the cerebral fundus, especially of the sella turcica and foramen magnum; (4) the abnormal smallness of the head in the fundus uteri in a breech presentation; (5) the rareness of ballottement of the head due to the abnormally short neck, and various symptoms such as a remarkable abdominal swelling, intense tension of the uterus, hydramnios, severe fetal movements, edema of hypodermic tissues, temporary albuminuria, anamnesis of syphilis, and faint fetal heart sounds as advocated by Lantaigne, Pinard, Giglio and others. The author diagnosed two cases of anencephalus during pregnancy by recognizing a slowing of the heart sounds of the fetus during vaginal exploration and ascertaining that they had no relation to labor pains and that they were due only to the pressure exerted by the exploring finger. In one case the number of the heart sounds decreased to 87 and when the pressure was discontinued the heart sounds gradually became normal. He found that there were differences in the degree of the symptom according to the parts of the brain pressed.

Presse Médicale, Paris

41: 329-344 (March 1) 1933

Pancreatic Hormone in Arterial Hypertension. Abrami, Santenoise and Bernal.—p. 329.
*Hepatic Sequelae After Operations on Gallbladder. R. Jahiel.—p. 331.

Hepatic Sequelae After Operation on Gallbladder.—Jahiel has observed that women who have been operated on for cholecystitis (often lithiasic) and whose extrahepatic bile ducts have been freed of all obstacles sometimes present repeated hepatic colics analogous to those observed before the intervention. In certain cases the recurrent hepatic phenomena seem to be influenced by the ovarian function. In one case the hepatic attack always occurred three or four days before the menstrual period but disappeared (with the exception of one mild attack) after sterilization with radium; in another case the hepatic disturbances disappeared at the menopause. In a third instance, however, the hepatic colics recurred only during the menopause. It seems that after cholecystectomy hepatic sensitivity to ovarian function may persist, no matter in what manner the latter varies. The author was also struck by the coexistence of manifestations of sensitivity closely linked with the hepatic attacks; in one case the attacks of hepatic colic occurred after attacks of asthma. In these cases the hepatic colics may be regarded as manifestations of a constitutional, organic sensitivity. In view of these facts the author suggests the hypothesis that a large part of the biliary syndromes and, above all, hepatic colics that one observes in the clinic are manifestations of the reaction of the liver to a dysfunction of the gallbladder in a person previously sensitized. In rare cases the person may remain sensitized to another cause and reproduce the syndrome after surgical intervention.

41: 345-368 (March 4) 1933

Sclerodermas, Keloids and Calcemia. L.-M. Pautrier.—p. 345.
*Unrecognized Disturbances of Constrictors of Pharynx. H. Proby.—p. 348.
Sarcoma of Internal Meniscus of Knee. G. Pieri.—p. 348.
Roentgen Therapy of Inflammatory Diseases. A. Plichet.—p. 349.

Unrecognized Disturbances of Constrictors of Pharynx.—Proby reports a case of chorea of the constrictors of the pharynx. To his knowledge it is the only case reported in the medical literature. The explanation of this may lie in the abuse of the term paresthesia, which is used for all the pharyngeal disturbances whose precise pathology is not known. He has thought for a long time that these disturbances are based on a real lesion, such as microscopic abrasion of the pharyngeal mucosa or contraction of the muscles of the pharynx, which may be due to local infection or general infection. The pharyngeal muscles may be affected just like other muscles by toxins poured into the blood stream from a local or general infection. It is known that chorea exhibits a predilection for the muscles subjected to a constant effort, in the upper and lower extremities and the face. It is difficult to find muscles subjected to more intensive work than those of the pharynx and it is easy to conceive that they may be affected on the same grounds as the other muscles by admitting that fatigue and decreased resistance favor the localization of infection in muscles in constant use. The author illustrates his theory with a case in which constriction of the pharynx appeared simultaneous with attacks of convulsive movements and unusual motor phenomena at the age of 15, six years after an attack of chorea. A nerve sedative caused the disappearance of the pharyngeal constriction as well as the motor disturbances in three weeks, and the therapeutic results were consolidated by administration of solution of potassium arsenite. Quarterly examinations have shown a permanent cure.

Revue Française de Pédiatrie, Paris

8: 649-784, 1932

Allergy to Ovalbumin in Nursling. P. Woringer.—p. 649.
Scarlet Fever and Rheumatism. V. Moltschanow.—p. 675.
Blood Transfusion in Severe Bronchopneumonia in Early Infancy. G. Phélizot and B. Tassovatz.—p. 695.
*Injection of Maternal Blood in Severe Vomiting of Nursling. H. Audéoud.—p. 737.
Case of Erythremia Successfully Treated with Raw Onions. L. Boissonnas.—p. 745.
Myxosarcoma of Bladder in Infant. A. G. Weiss and R. Meyer.—p. 748.

Injection of Maternal Blood in Vomiting of Nursling.—Prompted by the favorable results obtained by Robert with injections of maternal blood in cases of severe vomiting in

nurslings, Audéoud tried this treatment in eight cases. The age of the nurslings varied from 5 weeks to 3 months. All presented repeated, abundant, projectile vomiting, had lost considerable weight, and were weak and in poor general condition. Injections of 20 cc. of the maternal, or sometimes paternal, blood were made every two or three days, 10 cc. being injected into each buttock. The treatment lasted from three to nine weeks. The initial constipation was gradually replaced by normal bowel movements, and the vomiting was gradually cured; the infants regained the appearance of good health and were able to take normal meals. The increase in weight varied from 650 Gm. in twenty-two days to 1,515 Gm. in seven and one-half weeks, the average gain being 1,029 Gm. Dietetic therapy should be concurrent with the hemotherapy. At first only carbonated water was given in teaspoonfuls; later it was mixed with sweetened condensed milk. The amounts were gradually increased as the vomiting decreased. Massage with warm camphor liniment and warm compresses on the region of the stomach every two or three hours aid in calming the violent contractions of the stomach. The mode of action of the injections is not known. Robert thinks it may act as in anaphylactic diseases. The treatment is a simple one that can be used by the general practitioner and may avoid a surgical intervention.

Archiv für klinische Chirurgie, Berlin

174: 209-400 (Feb. 18) 1933

Use of Thorotrast. K. Ebhardt.—p. 209.
Experimental Studies on Blood Changes, Result of Aseptic Thrombus Formation. S. Kojima.—p. 216.
Pathogenesis and Symptoms of Hepatodiaphragmatic Interposition. N. A. Podkaminsky.—p. 242.
Late Results of Injuries to Heart Muscle and Coronary Vessel. G. Gronwald.—p. 249.
*Clinical Investigation of Splenic Function. M. Kuru.—p. 281.
Secondary Ovarian Carcinoma Demonstrated in Case of Primary Carcinoma of Esophagus. H. Offergeld.—p. 324.
Large Neurinoma of Seventh Cervical Nerve with Especial Attention to Bone Changes. V. Jura.—p. 341.
Serum Therapy of Appendicular Peritonitis. F. Prochnow.—p. 349.
Bronchiectasis Result of Gunshot Wound of Lung. E. Sereghy.—p. 360.
Histopathologic Study of Malignant Tumors of Mouth. J. Hofhauser.—p. 371.
Diagnostic and Therapeutic Value of Diastase Determination. G. Garry.—p. 378.
Ewing Sarcoma with Spontaneous Fracture Symptom Free for One and One-Half Years Treated by Roentgen Irradiation Solely. A. Zuppinger.—p. 397.

Splenic Function.—Kuru studied the effects of the removal of the spleen in twenty patients. The cases investigated fall into four groups: 1. Cases characterized by increased destruction of erythrocytes in the spleen with resulting icterus. 2. Cases characterized by intrasplenic destruction of thrombocytes and resulting in a hemorrhagic diathesis known as essential thrombopenia. 3. Cases characterized by massive primary splenic enlargement associated with the so-called Banti symptom complex. In this group, in addition to the involvement of erythrocytes and thrombocytes, the leukocytes suffer as well. They are reduced in number and in their capacity to react to certain stimuli, such as injections of epinephrine. 4. Cases in which the spleen was removed for purely accidental causes, such as subcutaneous rupture of the spleen or its involvement in a gastric malignant tumor. The author concludes that a number of blood changes following splenectomy and ordinarily ascribed to the loss of splenic function should in reality be referred to the disturbance in the correlation of the hematopoietic activity. His experiments, however, clearly demonstrate that the splenic function of blood destruction may prove to be the most important feature in certain conditions. The author demonstrated it by finding an increased bilirubin content of the blood from the splenic vein, by the reduction of the cholesterol content of the erythrocytes and by the lowering of resistance of the red cells. Certain changes occur as the result of the operation itself and must not be confused with changes due to the loss of splenic function. These are increases of erythrocytes and leukocytes, and shortening of the bleeding time and of the coagulation time observed directly after the operation, as well as changes in the blood albumin and blood viscosity and in the sedimentation time of the erythrocytes. Loss of the spleen gave rise to the following changes: (1) increase of blood platelets and erythrocytes, lymphocytosis, monocytosis and increase of the cholesterol content of the plasma; (2) increase of the resistance power of the erythrocytes, appearance of the Howell-Jolly bodies and increase of the cholesterol content of red blood cells.

Beiträge zur klinischen Chirurgie, Berlin

157: 113-224 (Feb. 18) 1933

Resection of Basal Phalanx for Hallux Valgus. M. Kaspar.—p. 113.
Problem of Pseudarthrosis and Its Relation to Bone Regeneration. W. Schilling.—p. 121.
D'Hérelle's Phenomenon with Staphylococcus Pyogenes-Aureus. M. Shimizu.—p. 154.
Sagittal Presentation of Lower Cervical and Upper Thoracic Vertebrae in Roentgenogram. T. Bársony and E. Koppenstein.—p. 166.
*Treatment of Carcinoma of the Rectum in Göttingen Clinic from 1912 to 1931. E. R. Heydemann.—p. 173.
*Place of Sympathectomy in Surgery. W. Rieder.—p. 193.
*Preoperative Treatment of Exophthalmic Goiter. W. Nell.—p. 212.

Treatment of Carcinoma of Rectum.—Heydemann presents a clinical statistical study of carcinoma of the rectum treated in the Göttingen clinic during the period from 1912 to 1931. Of the 346 cases treated, 218 were in men (63 per cent) and 128 in women (37 per cent); 164, or 47.4 per cent of the patients, were submitted to the radical operation; 52.6 per cent came to the clinic in an inoperable state; 18.7 per cent died while in the hospital. Of these, 23.7 per cent died after the radical operation and 13.7 per cent without the radical operation. The importance of early and radical removal of rectal polyps is suggested by the fact that, in twenty-seven patients, carcinoma developed in a polyp. As the result of comparison of the various methods used in the clinic the author draws the following conclusions: The radical operation is the only method to be considered in the treatment of operable cases. The combined operation gives the best results. This should be preceded by an exploratory laparotomy in order to establish the question of operability. Preservation of the anal sphincter is possible only in high localization and even then in a small proportion of the cases. The primary operative mortality can be lowered by the adoption of the two-step method: (1) formation of an artificial abdominal anus and (2) abdominal or, preferably, the combined abdominosacral extirpation of the rectum with extraperitoneal closure of the rectal stump. Roentgen or radium irradiation is suggested in all cases in which a doubt as to complete removal exists. An improvement lasting for years can be brought about in the inoperable cases by formation of an artificial anus, by irradiation and by repeated electrocoagulation. Irradiation as the sole treatment for operable cases is not admissible. Finally, the intractable pains of an inoperable carcinoma can be relieved by chordotomy.

Future of Sympathectomy.—Rieder, in his discussion of sympathectomy, points out the established anatomic facts with regard to the sympathetic nerve paths. The sympathetic nervous system serves as the connecting link between the spinal cord and the vegetative organs. The connection is accomplished by means of the rami communicantes albi. From the sympathetic trunk, by means of the rami communicantes grisei, sympathetic nerve fibers pass to all the internal organs, the peripheral blood vessels, the erector muscles of hairs and the sweat glands. In addition to the sympathetic nerve fibers with a segmental distribution, the blood vessels possess autonomous nerve plexuses. The author points out that, in spite of numerous favorable reports, periarterial sympathectomy has been on the whole disappointing in vasomotor disturbances, Raynaud's disease, traumatic edema (Leriche) and acute osteoporosis. The limitations are to be seen in the fact that the operation, while removing the autonomous nerve plexuses, leaves the segmental nerve fibers intact. In the author's experience, ramisectomy is much more effective. This operation, first performed in man by Royle, severs all the vasoconstrictor fibers and accomplishes as much as ganglionectomy. To interrupt vasoconstrictor impulses to the hand it is necessary to section the gray branches running from the fourth cervical to the second or third thoracic ganglion. For the foot this is accomplished by sectioning the rami communicantes grisei from the third lumbar to the second sacral ganglion. It was observed at times that ramisectomy on one side benefited the condition on the opposite side. Since all organs have a double innervation, sympathetic and autonomic, it is evident that a nerve supply will still remain after a sympathectomy. The study of the literature with regard to the results obtained by rami-

sectomy in bronchial asthma and in angina pectoris shows that they were disappointing. On the basis of his own experience with seven cases of endangiitis obliterans in which he operated, the author believes that the presence of the spastic component in the symptom complex constitutes the most favorable indication for sympathectomy. Cases characterized by attacks resembling Raynaud's disease gave the best results. Favorable results from ramisectomy could be predicted with a considerable degree of certainty if the limb developed hyperemia and hyperthermia after anesthetization of the peripheral nerves supplying it. Lack of response is a contraindication to operation. The author maintains that by the adoption of this test one may expect ramisectomy to relieve the unbearable pains of endangiitis obliterans, improve the condition, prevent the threatening gangrene and obviate an amputation. Of the seven patients operated on by the author, five were permanently relieved when examined five years, three and one-half years and three years later. Of eight cases of Raynaud's disease which did not respond to conservative treatment and in which a ramisectomy and ganglionectomy were done, four were cured, two improved, and in two the symptoms returned. Postmortem on one of the failures revealed that the inferior cervical ganglion, the first thoracic ganglion and a portion of the cervical sympathetic trunk were removed. In addition, a periarterial sympathectomy of the subclavian artery was performed. The two cases resulting in failure demonstrate the importance of the autonomy of the peripheral plexuses.

Exophthalmic Goiter.—According to Nell, lack of unanimity in the treatment of exophthalmic goiter is caused by the variability in the clinical course of the disease. Severe acute exacerbations in mild cases are no less unusual than long remissions in full blown cases. He deplores the indiscriminate administration of iodine and states that practically every patient applying to the Göttingen clinic because of an enlarged thyroid gland had had iodine. The aim of the treatment is to reduce the thyroid function, and that is best accomplished by a subtotal thyroidectomy. The dominant features in the preoperative treatment are: (1) absolute rest, (2) rest combined with medicaments, roentgen treatment and minor preoperative surgical procedures such as ligation of vessels, and (3) iodine treatment after the method of Plummer and Boothby. The author considers the iodine treatment by far the most important single measure in the preoperative management of these patients. Administration of iodine converts a hyperplastic goiter into a colloid goiter. The histologic changes are closely paralleled by improvement in clinical symptoms. Psychic manifestations abate, the weight increases, the pulse is slowed and the basal metabolic rate is lowered. Exophthalmos and struma are likewise affected. The experience of the war and postwar periods demonstrated that a spare diet, poor in albumin and fat content, diminished the incidence of thyrotoxicosis and exerted a beneficial effect in cases of thyrotoxicosis. A lactovegetarian diet consisting of small but frequent meals was found to be most effective in raising the weight and improving the general condition of the patients. In view of the lack of knowledge as to the interrelation between the thymus and the thyroid, irradiation of the former as a preoperative measure in the severer forms of the disease has not been accepted by most surgeons. Roentgen irradiation as a preoperative measure is almost universally objected to. There is no certainty as to the time necessary to accomplish the desired result, and many cases are refractory to irradiation. Occasionally the treatment is followed by necrosis and by hypothyroidism. Sauerbruch is of the opinion that the general health in the refractory cases is impaired by it. That the treatment is not absolutely safe is attested by the occasional reports of deaths at the end of or during a course of treatment with roentgen radiation. Fibrillating and arrhythmic hearts yield to treatment with quinidine, but digitalis alone was found to be ineffective. The optimal time for operation is between the seventh and the eleventh day: the basal metabolic rate is not an absolute indication as to the best time to operate. Close observation by an experienced surgeon is necessary in conjunction with readings of the basal metabolic rate. One should not wait too long and one should not operate if the metabolism is rising. Tribrom-ethanol is the principal anesthetic employed in the Göttingen clinic. The author considers its introduction a great advance in the surgical treatment of thyrotoxicosis.

Deutsches Archiv für klinische Medizin, Berlin

174: 581-676 (Feb. 9) 1933

Studies on Colloid Osmotic, Oncotic Pressure: Nephrosis With Low Colloid Osmotic Pressure and Without Edema. E. Kylin.—p. 581.
*Electrocardiographic Observations in Typhoid and in Pneumonia. P. Lukomski.—p. 587.
To What Extent Does Human Skin Have Capacity to Absorb Water? A. Schwenkenbecher.—p. 596.
Lobar Pneumonia: Clinical Course and Pneumococcus Type. I. Oettinger, I. Masel and L. Wiktorow.—p. 602.
Id.: Type Specific Reaction of Urine. I. Oettinger, I. Masel and L. Wiktorow.—p. 615.
Id.: Significance of Bacillus Carriers for Type I and Type II Pneumonia. I. Oettinger and L. Wiktorow.—p. 620.
Cystomicroscopy. R. Mayer-List.—p. 629.
Genetic Relations Between Microliths and Gallstones, Especially Pigment Calcium Stones. G. Lemmel and W. Büttner.—p. 641.
*Active Pulmonary Edema. L. Hess.—p. 649.
*Atypical Hypoglycemic Manifestations in Severe Diabetes. E. Haintz and E. Kolta.—p. 667.

Electrocardiographic Observations in Typhoid and Pneumonia.—Lukomski studied the electrocardiograms of sixty patients with typhoid and of forty patients with pneumonia. In 68 per cent of the patients with typhoid he observed tachycardia. Bradycardia was noted in only 16.6 per cent of the cases, and it usually set in after the fever had decreased. During the fever period these patients, as a rule, showed a divergence between pulse acceleration and temperature increase. The author thinks that intoxication of the central nervous system by the virus of typhoid is the main cause of tachycardia and bradycardia. Disturbances in the cardiac conduction system are slight and rare and disappear again comparatively early. They appear in the electrocardiogram only as a prolongation of the PR interval. Extrasystole was observed in a few typhoid patients and fibrillation arrhythmia was never observed. The negative T deflection with corresponding changes in the ST interval was observed comparatively often in typhoid. The changes in the T deflection and in the ST interval are the main indicators of myocardial changes in typhoid. In the pathogenesis of cardiovascular insufficiency of typhoid, an essential part is played also by the decrease of the vascular tonus, which becomes manifest in a considerable decrease of the blood pressure (especially of the minimal pressure), in the development of the rapid pulse and in dicrotism. The author thinks that these manifestations are related to the intoxication of the central nervous system. In pneumonia, the electrocardiographic signs of myocardial disturbances are extremely slight. They are limited to an occasional extrasystole, fibrillation arrhythmia and negative P and T deflections. The decrease in the tonus of the peripheral circulation represents an important factor in circulatory insufficiencies of the acute pneumonias as well as in typhoid.

Active Pulmonary Edema.—Hess reviews the mechanical factors of pulmonary edema and points out that it is probable that nervous processes also play a part. He discusses two factors connected with the latter problem: (1) the nutritional reflex of the active lung and (2) the changes in the circulation during acute increase in pressure. The thought that the increased activity of the lung leads to active congestion and thus produces the condition for increased transudation induced the author to investigate the behavior of the lungs in cases in which, because of anatomic conditions, there is an increased activity of one lung. He discusses and illustrates with case reports the pulmonary function in the following conditions: the constriction of one lung by pleuritic adhesions, the exclusion of large portions of the lung by pneumonia and the obstruction of large bronchial branches by tumors. He describes the changes in the circulation during acute increase in pressure and reviews a case history showing that congestive pulmonary edema was not produced by insufficiency of the heart but rather by a considerable increase in blood pressure, which in turn was the result of tumors of the suprarenals. The author thinks that in these two types of cases the increased circulation of the lung is the result of nervous impulses and that it may lead to increased transudation and to profuse expectoration. Small amounts of fluids from the capillaries and the venules enter into the alveolar spaces of the lung even under physiologic conditions and are eliminated during expiration. If, however, under pathologic conditions the quantity of transudated fluid increases, it can no longer be completely eliminated, and it gradually fills the air cells and bronchioles. As this obstruction of the air passages advances, the dyspnea

becomes more severe and the activity of the unimpaired parts of the lung and their blood perfusion increases.

Atypical Hypoglycemia. — Haintz and Kolta relate the clinical histories of four patients with severe diabetes. All had high blood sugar values in the morning and a persistent glycosuria. The unusual aspects of these cases were attacks in which the nervous symptoms predominated and the hypoglycemic origin of which was proved not only by the low blood sugar values during the attacks but also by the prompt action of the administered carbohydrates. The authors conclude that in manifestations indicating disturbances of the central nervous system, in patients who require large amounts of insulin, hypoglycemia should be thought of, even if a blood sugar test several hours before revealed high blood sugar values.

Deutsche medizinische Wochenschrift, Berlin

59: 279-316 (Feb. 24) 1933

*Multiple Sclerosis and Hereditary Factor. F. Curtius.—p. 279.
Extraction of Senile Cataract in Capsule. W. Stock.—p. 281.
*Clinical Value of Carcinoma Reaction According to Lederer. Zwerg and H. J. Lauber.—p. 283.
Treatment of Chronic, Functional Constipation with Methods of Yoga Practice. E. Wittkower and K. Dhawan.—p. 284.
*Galactose in Dietary Treatment of Diabetes. J. Freund.—p. 285.
Sodium Salt of Barbituric Acid Derivative for Painless Delivery and in Gynecologic Interventions. M. Samuel.—p. 286.
Temperature Measurements with Thermo-Element in Short Wave field. O. Brinch and J. Kiilerich.—p. 288.
Experimental Syphilis in Parabiotic Rabbits. W. Krantz.—p. 289.

Multiple Sclerosis and Hereditary Factor. — Curtius shows that the etiologic pathogenic theories about multiple sclerosis have changed repeatedly and that the one-sided consideration of laboratory investigations led to a neglect of the hereditary factor. Moreover, in those cases in which heredity was considered, it was, as a rule, rather superficially investigated. The author examined 3,127 relatives of 56 families of patients with multiple sclerosis. As a proof that former hereditary investigations had been inadequate, he cites the fact that, of 749 persons in whom he discovered neurologic or psychiatric abnormalities, only 3 per cent had been found defective in former studies. He cites the following observations as the most important that were made in the course of these studies: 1. Nervous and mental diseases were 1.64 times as frequent in the families with multiple sclerosis as in the average population. 2. The incidence of neuropsychopathic disturbances in families with multiple sclerosis decreases parallel with the degree of relationship; that is, the incidence is highest in families with the closest blood relationship and lowest in those in which the relationship is most distant. 3. The higher incidence in families with multiple sclerosis is largely the result of purely hereditary factors, being in the proportion of 12:3 of the average population, whereas diseases that are primarily produced by environmental factors have approximately the same incidence in the two groups. These observations permit the conclusion that an unfavorable hereditary constitution of the central nervous system plays an important part in the pathogenesis of multiple sclerosis. The author gives a tabular report showing the predominance of a number of neuropsychopathic conditions in families with multiple sclerosis compared to the average population and shows that the "microheredodegenerations" play an important part in families with multiple sclerosis. He mentions hereditary tremor, hereditary labyrinthine baryecoia, hereditary abducens paresis, hereditary alexia, hereditary nystagmus and hereditary anomalies of the tendon reflexes. However, the central nervous system is not involved alone. Other quite frequent familial disorders are spastic constipation, allergic diathesis and hypogenitalism. As far as the body structure of patients with multiple sclerosis is concerned, the leptosomic type predominates.

Clinical Value of Lederer's Carcinoma Reaction.—The simplicity of Lederer's carcinoma reaction induced Zwerg and Lauber to test its reliability in forty-four cases. The diagnosis of carcinoma had been established by surgical treatment and by histologic examination of thirty-three, carcinoma was absent in nine and the diagnosis was doubtful in two. A detailed description of the technic of Lederer's reaction is not given, but the authors point out that it is based on the protective action of the blood against suspension colloids, which in carcinoma is supposedly reduced. On the basis of their observations they reject the method as unreliable.

Galactose in Dietary Treatment of Diabetes.—Freund studied the tolerance of diabetic patients for various carbohydrates. In a comparison of the tolerance for galactose and levulose with that for dextrose, the tolerance for levulose was found to rate highest. The author thinks that, to a certain extent, levulose as well as galactose can be used for sweetening the food of the diabetic patient, but he points out that studies by another investigator have proved that the polysaccharide of levulose, inulin, is even better tolerated.

Deutsche Zeitschrift für Chirurgie, Berlin

239: 241-368 (Feb. 19) 1933

*Diagnosis of Drunkenness in Accidents by Means of Determination of Amount of Alcohol in Blood. R. Goldhahn.—p. 241.
Latent Toxic Damage and Its Rôle in Operative Trauma. H. J. von Brandis.—p. 262.
*Results of Treatment in Exophthalmic Goiter. W. Ewald.—p. 275.
Results in Treatment of Fractures of Thigh. K. Brandt.—p. 294.
Late Results of Resection in Linear Degeneration of the Patella. K. H. Erb.—p. 332.
Method of Autohemotherapy. F. Schürer-Waldheim.—p. 352.
Experimental Studies of Removal of Foreign Blood After Loading of Reticulo-Endothelial System with Thorium Dioxide and Thereby Injuring the Organism. H. Hanke.—p. 363.

Diagnosis of Drunkenness. — Goldhahn points out the desirability of an objective method of determining the state of drunkenness or sobriety in traffic accidents. The author recommends the adoption of Widmark's micromethod of determination by means of which it is possible to estimate the exact amount of alcohol imbibed as well as its effect on the general state of the person. Accurate determination of the total amount of imbibed alcohol is possible within limits of error amounting to 10 per cent. A concentration of 2 per cent or higher is to be regarded as capable of producing decided alcoholic effect. Acetonemia is mentioned as a possible source of error. The blood alcohol, however, in this condition does not exceed a concentration of 0.3 per cent. The author suggests that with the legalization of the test both the driver and the injured be submitted to the test.

Exophthalmic Goiter.—Ewald states that in his material the severity of the disease could not be gaged by the basal metabolic rate, the lymphocytosis, or the histologic picture of the thyroid gland. The general clinical picture was a safer guide. He is of the opinion that thymic involvement as well as the reaction to iodine vary in goitrous and in nongoitrous localities. Iodine was taken by 31 per cent of the patients with thyrotoxicosis because of enlargement of the thyroid gland. Of the 147 patients with exophthalmic goiter treated in the Bonn clinic between 1920 and 1930, 89 per cent were women and 11 per cent were men. Of the 126 patients operated on, 16 died, giving a mortality of 12.8 per cent. Since the introduction of Plummer's method of preoperative iodine administration into the clinic in 1928, the mortality was reduced to 9.1 per cent. Heart failure was the principal cause of mortality. The author suggests that sudden deprivation of the thyroid secretion rather than the flooding of the organism with the secretion, as formerly believed, may be the cause of death. The results with the preoperative administration of iodine were gratifying. The most constant effect was seen in lowering the pulse. The basal metabolic rate was lowered from 30 to 35 per cent, the weight increased and nervousness subsided. The effect of quinidine and digitalis on the pulse frequency was not as striking as that of iodine. The experiences with roentgen irradiation, both as a preoperative and as a curative measure, were unsatisfactory. There was one fatality thirteen days after the last roentgen exposure and another after the first treatment. The author shares Rieder's view that roentgen irradiation is liable to be particularly dangerous in the severe cases. The results after operation are considered excellent. There was noted in all cases a rapid improvement of all the symptoms. The pulse fell to from 74 to 80, the patients gained in weight and in strength, the basal metabolic rate fell to 10 or lower. Of the patients operated on, 82 per cent were able to follow their original occupations. There were only two recurrences, and they were cured by a secondary operation. Subtotal bilateral resection in one stage proved to be the operation of choice. This, in exceptionally severe cases, was preceded by ligation of two or of all four arteries. The author suggests that the operative mortality will be materially lowered when patients with exophthalmic goiter are operated on before irreparable damage to the organism has taken place.

Klinische Wochenschrift, Berlin

12: 249-288 (Feb. 18) 1933. Partial Index

Elimination of Antigen Substances in Urine During Infectious Diseases, Particularly in Tuberculosis and Syphilis. F. Klopstock.—p. 249.
*Coma Resulting from Insulin Deficiency and Coma Refractory to Insulin in Course of Diabetes Mellitus. S. J. Thannhauser and H. Fuld.—p. 252.
Relations of Hypersusceptibility and Immunity in Experimental Streptococcic Infections. R. Böhmig.—p. 258.
Correlations of Linear Heart Size and of Heart Volume. A. Kahlstorf. —p. 262.
Influence of Mono-Iodo-Acetic Acid on Bacterial Lactic Acid Formation. K. Meyer.—p. 265.
Immobilization of Lung in Collapse Therapy. E. Brieger.—p. 266.
*Therapy of Melaena Neonatorum: Time Required for Intestinal Passage in the New-Born. W. Bayer.—p. 269.
Pseudopneumonia Infantum. M. A. Goldzieher and M. B. Gordon. —p. 270.
*Cultural Demonstration of Tubercle Bacilli in Serous Body Fluids by Means of Fluid Mediums. A. Axen.—p. 273.

Coma Refractory to Insulin.—Thannhauser and Fuld relate the clinical history of a woman, aged 65. She had diabetes mellitus and for a number of years she reacted favorably to insulin. Then, for some unexplained reason, she became insulin resistant within the short period of twelve days. She required increasingly larger amounts of insulin until from 300 to 450 units did not decrease the blood sugar to low values, and did not noticeably influence the elimination of sugar. The acetonemia and acetonuria reached enormous values. In the beginning of the insulin refractory stage the patient was still conscious and the circulation was unimpaired, but visual disturbances set in. The comatose circulatory weakness did not develop until eight hours after the completely developed coma. The authors point out that the cases of insulin resistance which have been reported in the literature can be classified into three groups. The first group includes conditions in which sugar is eliminated while the blood sugar content is normal or subnormal, and large amounts of insulin are necessary to overcome the glycosuria. The second group includes cases with increased blood sugar, which for a certain time require large amounts of insulin to become sugar free and in the sugar-free stage tolerate large amounts of insulin. The authors think that in these cases insular and extra-insular factors are involved. The third group includes cases in which high blood sugar, acetonemia and acetonuria exist and in which enormous amounts of insulin are necessary to eliminate the ketone bodies. In these patients there usually exists an intercurrent febrile disease or an abscess. After cessation of the fever or the suppuration, the insulin requirements are once more normal. The case reported belongs to none of these groups but represents a fourth type of insulin resistance, which the authors designate as "insulin refractory." They review Thannhauser's theory of insulin action and conclude that in the reported case there existed at first a true insular diabetes with insulin deficiency. In addition to this disturbance a second one developed, the nature of which is unknown but which withdrew the fermentative substrate of the liver cell from the insulin action, blocked it completely and perhaps destroyed it. It is evident that, if the point of attack is lacking, the largest amounts of insulin are ineffective. As a rule diabetic coma is the result of pancreatic insufficiency, and administration of insulin usually counteracts it. In rare instances, as in the reported case, a refractory diabetic coma may develop because the point of attack of the insulin is blocked or entirely destroyed. The coma resulting from insulin deficiency and the insulin refractory coma show the same clinical aspects; that is, complete failure of the intermediate metabolism and resulting intoxication. However, the mechanism of pathogenesis differs greatly in the two conditions.

Melaena Neonatorum.—Bayer doubts the possibility of an early diagnosis of melena and he thinks that in most cases the diagnosis is made when the hemorrhage has already ceased and when the therapy would naturally be too late. In order to know more about this problem, it is essential to know the time required for intestinal passage in the new-born. Because the literature gives little information about this, the author studied the time required for intestinal passage in 132 newborn infants. His studies indicate that the intestinal action is extraordinarily slow during the first twenty-four hours and that the action becomes more rapid only on the second or third day. Experiments in which the twenty-four hour fasting period was interrupted and food was given within the first ten hours proved that this is a physiologic regularity and not merely the result of fasting. This observation is significant for melena because the diagnosis based on the elimination of blood comes as a rule too late; that is, at a time when treatment is no longer necessary because the hemorrhage has already ceased. The author thinks that this explains the reports about the favorable effects of intramuscular injection of serum or blood. These measures seem to be effective because they are used at a time when the crisis has already passed. In cases in which the persistence of the hemorrhage is manifest (hematemesis or rectal elimination of blood), it can be seen that only intravenous administration of blood is effective.

Demonstration of Tubercle Bacilli by Means of Fluid Mediums.—The culture medium employed by Axen was a 1 per cent dextrose bouillon. He states that, when cerebrospinal fluids or pleural exudates were examined in his laboratory, banal pus-producing organisms were always searched for. When the observation of such cultures was continued only for the few days sufficient for the detection of such organisms, it was observed that the dextrose bouillon remained clear even if animal experiments or culture on Petragnani mediums revealed that it contained tubercle bacilli. An accidental observation induced the author to keep the inoculated bouillon for a longer period, and he found that in a considerable number of cases a finely granulated, sandlike sediment developed between the twentieth and thirtieth days. This sediment then grew rapidly, so that on the fortieth day gray, yellowish granules of about pinhead size were noticeable, which proved to be pure cultures of tubercle bacilli. After that, the sediment as well as the size of the granules increased, but the medium never became turbid, nor was there a surface growth of tubercle bacilli. Consequently this is a true deep growth of the tubercle bacillus. The author compared the results of the deep culture with those of the culture on the Petragnani medium and of the animal experiment. In some instances he found the deep culture in the dextrose bouillon superior to either or to both of the other methods. He admits that in view of his limited material a final evaluation of the method is not yet justified and that additional studies will be needed, but he considers it a valuable addition to existing diagnostic methods, particularly because its simplicity makes it acceptable in small laboratories.

Medizinische Klinik, Berlin

29: 279-310 (Feb. 24) 1933. Partial Index

*Surgery of Biliary System. E. Melchior.—p. 279.
Free Diet in Diabetes. K. Stolte.—p. 288.
Idem. C. von Noorden.—p. 289.
*Experiences with Whooping Cough Vaccine. R. Ungar.—p. 290.
Albumin from Descending Urinary Passages. A. Legahn.—p. 293.
*When are Tubercle Bacilli Found in Blood and What Significance Has It for Organism? B. Busson.—p. 294.

Surgery of Biliary System.—Melchior's report shows that in true cholelithiasis he favors surgical intervention, because without it the prospects for permanent improvement are slight. As another argument for surgical intervention he cites the fact that many patients with cholelithiasis die of its complications. He discusses and illustrates with case histories such conditions as irreparable lesions of the liver, carcinoma of the liver, liver abscesses, acute pancreatitis, perforation of the gallbladder and cholemia. He explains the bacteriologic behavior of acute infectious cholecystitis and discusses the clinical diagnosis of uncomplicated cholelithiasis. He considers dropsy of the entire biliary system a particularly interesting chapter in the surgery of the biliary tract. He describes his observations on totally obstructing calculus of the choledochus and on putrid cholangeitis and discusses the postoperative complications.

Experiences with Whooping Cough Vaccine.—Contradictory reports about the efficacy of whooping cough vaccine induced Ungar to report his own observations in the course of a whooping cough epidemic in a children's home, and in eighteen cases in his private practice. Two types of vaccine were used, one containing only killed Bordet-Gengou bacilli and another one containing, besides the Bordet-Gengou bacilli, also Bacillus influenzae, Staphylococcus aureus, S. albus, Pneumococcus and Micrococcus catarrhalis. On the basis of his observations the author reaches the conclusion that the early use of whooping cough vaccine or of mixed vaccine influences the course of whooping cough favorably in the majority of cases. The vaccine should be injected during the

incubation period, the catarrhal period or, at the latest, the first week of the convulsive stage. If the weather permits, the children should receive fresh air treatment. As a rule, the administration of vaccine is followed by a temperature increase, which however, subsides again after twenty-four hours. In order to avoid unnecessary anxiety, the parents' attention should be called to this reaction and also to a possible temporary increase in the severity of the attacks of coughing in those instances in which the vaccine is given at the beginning of the convulsive stage.

Tubercle Bacilli in Blood.—After calling attention to the fact that hemolysis is superior to the complicated acetic acid method in the demonstration of tubercle bacilli, Busson describes his comparative studies with the Löwenstein culture method and with animal tests. He examined three pleural punctates and 160 blood specimens, 10 of the latter from patients convalescing from poliomyelitis without signs of tuberculosis. These ten all gave negative results, but the three pleural punctates that came from patients with clinical signs of tuberculosis all gave positive results. Of the other 150 blood specimens, 27 (18 per cent) gave positive results in the culture. The animal test was positive in ten cases in which the culture method had remained negative, and the culture method was positive in two instances in which the animal test remained negative. From these results the author concludes that the animal test made with the sediment obtained by hemolysis and not with whole blood is superior to the culture method in the demonstration of tubercle bacilli in the circulating blood. The twenty-seven cases in which the blood culture gave positive results all showed clinical signs of tuberculosis. However, the author's studies also revealed that even in febrile and progressive tuberculous processes the blood may be free from tubercle bacilli, which shows that even in these advanced stages tubercle bacillemia is not a permanent condition. The examination of blood from twenty-nine patients with cutaneous tuberculosis gave positive results in five cases. Nine, or 42.8 per cent, of twenty-one blood specimens from patients with polyarthritis were found to contain tubercle bacilli, both in the culture and in the animal tests; all of these showed clinical signs of tuberculous infection. In the final evaluation of his observations the author points out that the presence of tubercle bacilli in the blood is not constant, even in clinically identical conditions, but rather periodic or temporary. The bacillemia seems to be less dependent on the disease as such than on several other factors. In this connection the author discusses immunity processes in tuberculous infection and also the problem of the existence of an ultravisible form of the tubercle bacillus. He rejects the conclusions that Löwenstein and Reiter deduced from the frequency of tubercle bacillemia in articular rheumatism, pointing out that articular rheumatism is an extremely rare complication of tuberculosis, and in regard to the theory that articular rheumatism might be a special form of tuberculosis, he answers that it never leads to tuberculous changes in the joints. He is of the opinion that articular rheumatism is a disease entity which, like many other infectious diseases (measles, scarlet fever), disturbs the equilibrium between the attack by the tubercle bacillus and the defense power of the organism.

Monatsschrift für Kinderheilkunde, Berlin

57: 1-80 (Feb. 16) 1933

Comparative Measurements of Sella Turcica During Childhood. Lotte Brill.—p. 1.
*Nonsurgical Treatment of Torticollis During Nursling Age. J. Kelemen.—p. 7.
Treatment of Anemia in Nurslings by Means of Sulphur-Containing Organic Compound. A. Frank.—p. 23.
Roentgenoscopy of Lung in Whooping Cough and Its Clinical Significance. C. Hünermann.—p. 36.
*Serologic Diagnosis of Activity of Tuberculosis by Means of Colloid Buffering. K. Klinke.—p. 49.

Nonsurgical Treatment of Torticollis.—After giving a short history of the treatment of torticollis, Kelemen discusses its incidence, reviews different theories of its pathogenesis, and shows that as yet there is no generally accepted theory. On the basis of his own observations on thirty-two cases, he is inclined to believe that torticollis is not the result of a disturbance in the trophic functions of the central nervous system but rather that it is caused by a defective arrangement of the muscle and that scar tissue is present. The sternocleidomastoid muscle is more or less contracted, and on palpation it feels hard and thickened. The necropsy usually reveals sinewy, indurated tissues within the muscle. The nonsurgical treatment employed by the author had the object of softening the scar tissue chemically. For this purpose he injected into the muscle from 0.5 to 1 cc. of a substance consisting of chemically pure pepsin in Pregl's solution of iodine. The injections were given twice a week. After from three to six weeks of this treatment, cure was effected in the majority of cases. All children subjected to this treatment were less than 7 months old, the majority less than 3 months. The treatment never had injurious results, and its technic is simple. Other advantages are short duration of the treatment, little pain, possibility of nonsurgical treatment and absence of uncomfortable and expensive bandages. The author thinks that in nurslings this method of treatment should always be tried first.

Serologic Diagnosis of Activity of Tuberculosis.—In the serum of human beings who had active tuberculosis, Klinke was able to demonstrate that an addition of old tuberculin produced changes in the colloid buffering, which is the turbidity that results when acid is gradually added to a serum. This turbidity is caused by the approximation to the isoelectric point. If more acid is added, the serum again becomes clearer. The graphic demonstration of this titration (relation between addition of acid and turbidity) is a curve, the highest point of which is the iso-electric point. If old tuberculin is added to the serum of a patient with tuberculosis, the curve shows a considerable leveling on the descending side, whereas in the serum of normal patients the addition of tuberculin causes only a slight change. The author employed this method on 489 patients. He concludes that colloid buffering following addition of old tuberculin reveals a change in the serum colloids in 94 per cent of tuberculous patients. The nature of the colloidal changes is still unknown, but it is probable that the changes are in the serologically reacting protein bodies themselves.

Münchener medizinische Wochenschrift, Munich

80: 287-326 (Feb. 24) 1933

*Eczema Problem. G. A. Rost.—p. 287.
*Pellagra and Endocrine Disturbances. S. J. Thannhauser.—p. 291.
Remarks on Preceding Article in Regard to Pathologic Anatomy. L. Aschoff.—p. 296.
Explanation of Influence Exerted by Living Organism on Tissue Cultures. W. von Möllendorff.—p. 297.
Causes and Nature of Appendicitis. A. Krecke.—p. 299.
Incidence, Etiology, Symptomatology and Course of Pernicious Anemia. H. Scheidel.—p. 302.
Acute Iodine Poisoning and Iodine Action. I. Lejbowitsch.—p. 305.
Frequent Failure of Hormonal Therapy in Gynecology. O. Pankow.—p. 306.
Problems of Asthma Research. K. W. Tiefensee.—p. 309.
Endoscopic Method of Treatment of Erosions in Sauerbruch Canals. W. Guttenberg.—p. 313.
Roentgen Paper for Stereoscopy of Lung. H. Stelzer.—p. 313.
Demonstration Case for Paper Roentgen Film. F. O. Hess.—p. 314.
Scleroderma and Acrosclerosis. J. Sellei.—p. 314.
Peritonsillar Abscess. L. Haymann.—p. 315.

Eczema.—Rost shows that from the etiologic or causal-genetic point of view the definition of the term eczema is no longer tenable. He realizes that this is nothing entirely new, for many conditions to which formerly the term eczema was applied have been proved by recent studies to be different skin disorders. He shows that a number of cutaneous disturbances, still designated as eczema, are really not eczemas but belong to other groups of skin diseases. From this point of view he discusses premycotic, seborrheal and scrofulous eczema, and eczema of the leg. For the latter, which develops on the basis of the status varicosus, he suggests the term dermatopathia cyanotica. He discusses eczemas developing on the basis of metabolic disturbances of external noxae, and finally those in which idiosyncrasy plays a part.

Pellagra and Endocrine Disturbances.—Following a description of the three stages of pellagra and their symptomatology, Thannhauser points out that the theories of the etiology of pellagra reflect the different epochs in medicine. At one time it was considered to be caused by poisoning with food (spoiled maize); then anatomic and bacterial causes were thought responsible until Goldberger established it as an avitaminosis, produced by the lack of vitamin B_2. The author points out that sporadic cases of pellagra occur in all Euro-

pean countries, but since the characteristic cutaneous symptoms of pellagra may be absent or exist only temporarily, the diagnosis may be difficult. In regard to the etiology of these sporadic cases, he thinks that not only primary lack of vitamin B_2 may lead to pellagrous changes, but severe intestinal disturbances of a different pathogenesis may effect such changes in the intestine that vitamin B_2 is poorly absorbed. He reports and discusses the clinical histories of four patients in whom pellagrous symptoms concurred with endocrine disturbances. In one of them the cutaneous manifestations of pellagra were absent, but in the other three the syndrome was characterized by the following clinical manifestations: (1) frequent attacks of gastro-intestinal disorders with colic-like pains and with diarrhea but without noticeable steatorrhea; (2) severe psychic changes, decrease in the mental capacity, mental depression and funicular symptoms; (3) anorexia and emaciation; (4) crops of dull brown discoloration on the entire body, particularly on exposed areas; (5) lanuga-like hairs over the entire body; (6) adynamia; (7) decalcification of the bones with tendency to spontaneous fracture and osteophyte formation on the bones of the phalanges and on the metacarpal bones; (8) attacks of pellagrous cutaneous changes on hands and feet, which usually occur in fall and spring. It is difficult to decide in these cases whether the pellagra was primary, or whether the endocrine disturbances were primary. The anamnesis revealed an earlier pellagrous cutaneous eruption in only one of the patients, but the author is nevertheless inclined to believe that there existed a primary pellagrous disturbance with endocrine dysfunction in all the reported cases. He gives his reasons for this theory and he expresses the opinion that the suprarenals become impaired in the course of chronic pellagra, and that this in turn leads to endocrine dysfunction.

Wiener klinische Wochenschrift, Vienna

46: 225-256 (Feb. 24) 1933

Investigations on Blood Pressure and Kidney. L. Braun.—p. 225.
*Tubercle Bacillemia in Nervous Diseases. E. Loewenstein.—p. 228.
Circulatory Disturbances and Capacity to Work. R. Hift.—p. 231.
Treatment of Carcinoma with Substances from Incretory Glands and with Medicinal Substances. H. Januschke.—p. 237.
Prophylaxis and Therapy of Avitaminoses During Childhood. R. Wagner.—p. 241.
Pathology and Clinical Aspects of Influenzal Pneumonia, M. Weinberger.—p. 243.

Tubercle Bacillemia in Nervous Diseases.—In summing up his observations on tubercle bacillemia in nervous diseases, Loewenstein reviews his former studies on bacillemia. He points out that the term tuberculosis includes all the tissue changes produced by the tubercle bacillus. What is usually designated as tuberculous structure is only a facultative phase in the cycle of the tissue changes produced by the tubercle bacillus. Tuberculous infections are possible, without the presence of tubercles. The tuberculous tissue changes are not uniform but are dependent on the quality and the quantity of the strain, on the immunity condition, on the port of entry, on the time of examination and on the resistance of the organs. Tuberculosis is predominantly a vascular disease. The tubercle bacillus affects the endothelium of the vessels and frequently produces tubercles in the intima. These intima tubercles are the source of the blood infection. At postmortem examination the diagnosis of tuberculosis can be excluded only by means of a thorough microscopic and cultural control of the organs, macroscopic examination being insufficient. Tuberculosis is a systemic disease. This is indicated by metastases in all organs, by the characteristic fever curve and by the tuberculin susceptibility of all connective tissue cells. But the surest criterion that tuberculosis is a systemic disease is the occurrence of tubercle bacilli in the blood; that is, tubercle bacillemia. By means of his method of blood culture the author has been able to demonstrate tubercle bacilli not only in tuberculosis but also in many other conditions, such as lupus erythematosus, erythema nodosum et induratum, choroiditis, sympathetic ophthalmia, acute and chronic polyarthritis, chorea, multiple sclerosis, retrobulbar neuritis and dementia praecox. He devotes the largest part of this discussion to the occurrence of tubercle bacillemia in dementia praecox. He further points out that with his method the tubercle bacilli can be demonstrated not only in the blood but also in the disease foci, particularly in choroiditis, in sympathetic ophthalmia, in retrobulbar neuritis, in the articular fluids and in the cerebrospinal fluid. The demonstration is possible in the earliest stages, at a time at which roentgenoscopy does not yet permit a conclusion. He states that the detection of tubercle bacilli, being a direct method, has greater demonstrative power than the indirect methods (tuberculin reaction or complement fixation reaction) based on changes in the serum.

Zentralblatt für Gynäkologie, Leipzig

57: 449-496 (Feb. 25) 1933

*Operative Removal of Arrhenoblastoma Followed by Pregnancy. E. Mathias.—p. 449.
Influence of Parathyroid Extracts on Genital Function of Female Rats. W. Neuweiler.—p. 456.
Cyclic Bleeding from an Abdominal Fistula. W. Sigwart.—p. 458.
*Rabbit Serum Pregnancy Test. H. Hofmann.—p. 462.
Complete Puerperal Inversion of Uterus. A. Bock.—p. 468.
Course and Symptoms of Pernicious Anemia of Pregnancy. B. Berglas and F. Lasch.—p. 471.
New Method of Treatment of Posterior Parametritis. H. Harttung.—p. 479.
Bilateral Ligation of Hypogastric Arteries in Carcinoma of Cervix Uteri. C. Iubas.—p. 483.
Simple and Certain Method of Guarding Against Leaving of Laparotomy Sponges in Peritoneal Cavity. E. von Konrád.—p. 485.

Arrhenoblastoma and Pregnancy.—Mathias reports the case of a girl, aged 17, who, with an onset of amenorrhea two years previously, gradually developed the secondary sexual characteristics of a male. The amenorrhea was followed by a change in the voice, the growth of a beard, an enlargement of the clitoris, and a typical male distribution of the pubic hairs. At operation a unilateral ovarian tumor was removed. This was followed by a return to female configuration of the body and the disappearance of masculine hair growth. The voice remained unchanged. The patient married four years later and one year later was delivered of a normal child. The histologic picture of the tumor corresponded accurately to that described by Robert Meyer as an arrhenoblastoma. In addition to a characteristic histologic picture, the tumor gives rise to a typical evolution of the clinical course. The ovary of the patient contained latent masculine cells, which quantitatively were not sufficient to produce symptoms. When, however, these cells multiplied as the result of neoplastic transformation, sufficient heterosexual hormone was elaborated to cause virilization of the patient. The author states that his is the fifth case in literature in which pregnancy occurred after the removal of a masculinizing tumor.

Rabbit Serum Pregnancy Test.—Hofmann describes his procedure as follows: Blood is removed from the patient, centrifugated, taken up with ether and allowed to stand two hours. A female rabbit, weighing about 2.5 Kg., is laparotomized and the ovaries are inspected to exclude pseudorut, infantilism, malformations and dermoid cysts. Seven cubic centimeters of the serum is slowly injected into the marginal ear vein of the rabbit, and one hour later an additional 6 cc. of the serum is injected. Inspection of the ovaries is made from twenty-two to twenty-four hours later at a second laparotomy. The author applied this test in seventy instances of early pregnancies, pregnancies in the second half and extra-uterine pregnancies. The following advantages over the method of injecting urine are claimed: While the results in the seventy instances were as accurate as those obtained by the Aschheim-Zondek test, the time required was only twenty-four hours, the shortest so far required in any pregnancy test. Macroscopic inspection is sufficient in all cases. The particular usefulness of the test, because of the time element, is in suspected extra-uterine pregnancy.

Ugeskrift for Læger, Copenhagen

95: 189-218 (Feb. 16) 1933

*Cinchophen Jaundice. K. Larsen.—p. 189.
Case of Duodenal Ulcer with Pylorospasm and Increased Blood Urea. H. Kjaergaard.—p. 196.
Case with Apparatus for Examination of Urine. H. Tvedegaard.—p. 199.
Addison's Disease Treated with Swingle and Pfiffner's Extract (Eucortone): Case. N. I. Nissen.—p. 201.
Suspensory for Breast. Asta Oldager.—p. 202.

Cinchophen Jaundice.—Larsen reports a case of jaundice due to cinchophen and presents a tabulated review of the ninety-six cases found by him in the literature, of which forty-two were fatal; in the thirty-five cases with necropsy, acute yellow atrophy of the liver was found.